ENGINEERING NEWS-RECORD

Well on its way toward completion is the Bureau of Reclamation's Altus Dam, in Oklahoma

NEERING
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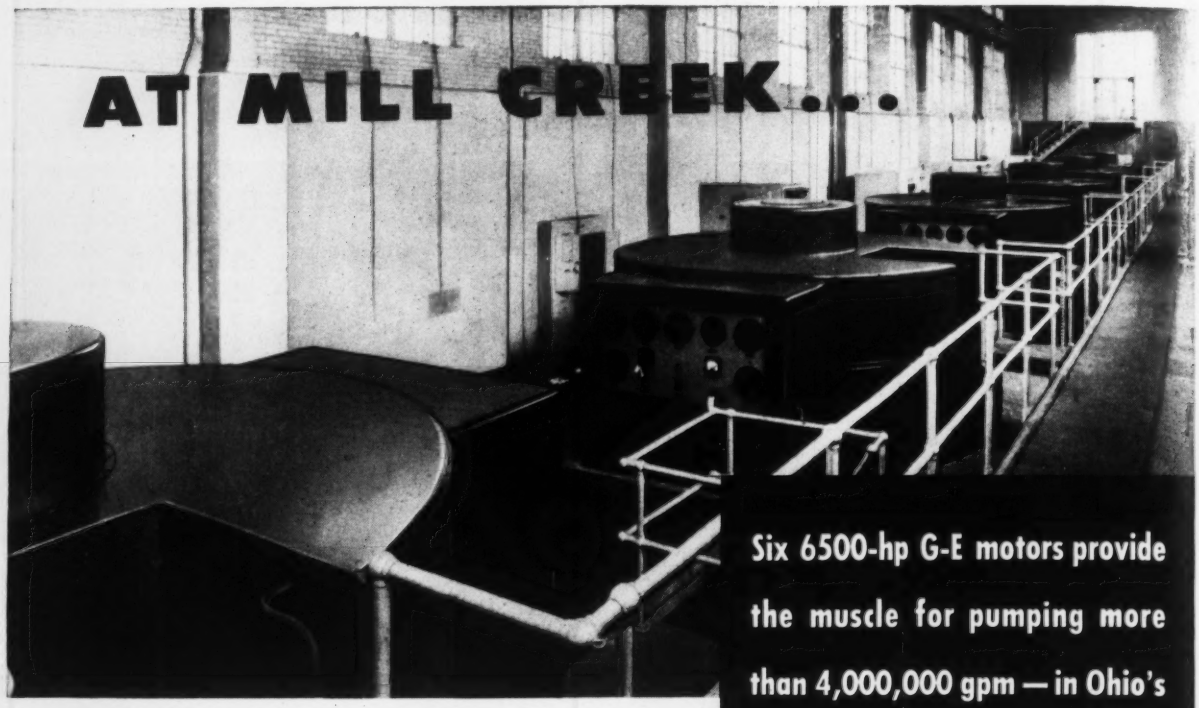
AT MILL CREEK...



Six 6500-hp G-E motors provide the muscle for pumping more than 4,000,000 gpm — in Ohio's largest flood-control project.

6500-hp vertical synchronous motors in Mill Creek Pumping Station. Note the use of unusual built-in gage boards with instruments for recording bearing and winding temperatures. This control system not only keeps the Ohio from backing up but also drains off excessive rainfall, melting snow, and mounting headwater that would ordinarily swamp the low valley.

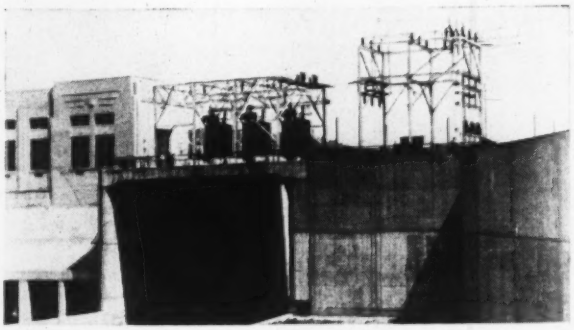
With G-E motors, control, and substation, Mill Creek Pumping Station is almost completely G-E equipped.

This Cincinnati pumping station contains most of the electric equipment to drive six S. Morgan Smith stationary-blade propeller-type pumps. The structure is the largest ever built for its purpose, as are each of the pumping units. The six 6500-hp vertical synchronous motors were designed by General Electric to operate each of the pumps against a 29-foot head, 1500 cubic feet of water per second, or 9000 cubic feet per second total.

The pumps were located below the flood level of the river, and a siphoning action occurred. This was reflected as an unusual peak in the pump's starting torque requirements. To get over this starting peak it was necessary for G-E engineers to design a motor with the proper torque characteristics, yet without increasing the size or cost of the motor. At the same time all six motors had to start without causing excessive disturbance to the power system.

But G.E.'s part didn't stop there. G-E engineers helped to design and co-ordinate the entire electric system, laying out substation equipment to supply power to the pump motors, and installing a completely co-ordinated control system, factory-assembled and tested. *Apparatus Dept., General Electric Company, Schenectady 5, N. Y.*

General Electric's contribution to the Mill Creek project was typical of the Company's service to the construction industry. Our engineers have worked closely with other engineers and pump manufacturers on flood-control projects since 1933. Among these are the projects at Cypress Creek and Nonconnah in Memphis, the Mississippi River project, the Deshee Ditch pumping plant near Vincennes, and the New England flood-control projects. G-E engineers stand ready to co-operate with you in your construction planning.



The Mill Creek Valley flood-control unit consists of a barrier dam at the mouth of the creek, this modern pumping station, and a large discharge bay. Located beside the pumping station are Type H 5000-kva transformers and other power-distribution equipment, with high voltage of 66,000 and low voltage of 6900.

GENERAL ELECTRIC

656-49-162

News of the Week

ENGINEERING NEWS-RECORD • JANUARY 31, 1946 • VOLUME 136 • NUMBER 5

New federal budget contains $875 million for construction

President recommends $305,800,000 for PRA, $295,000,000 for U. S. Army Engineers, and $156,900,000 for Bureau of Reclamation in the coming fiscal year 1947

In his annual message to Congress, President Truman last week recommended that more than $875,000,000 for construction and planning be provided in the federal budget for the fiscal year 1947, which begins July 1. This total will be supplemented by large amounts expected to be provided later under individual bills.

In his message, the President urged the Congress to enact legislation providing federal aid for airport construction and for development of the Great-Lakes-St. Lawrence River basin. He also asked for a comprehensive program of aid to scientific research.

Large amount for roads

Recommended appropriations for planning and construction by the Public Roads Administration totalled $305,838,792. This money includes $175,000,000 to aid state highway departments under the 1944 Federal-Aid Highway Act; $55,000,000 to meet obligations on primary highway projects planned in accordance with the 1940 Highway Act and deferred because of the war; and $30,000,000 for elimination of grade crossings.

Other recommended appropriations for PRA include: $10,515,637 for projects on the strategic highway network and to go forward in accordance with the Defense Highway Act of 1941; $23,000,000 for federal aid for jobs on secondary and feeder roads in accordance with the 1940 Highway Act; $7,323,155 for access roads; and $5,000,000 for work on the Inter-American Highway in Central America.

Further appropriations needed

Because the 1944 Highway Act provides $500,000,000 of federal aid yearly for three years, additional appropriations to match state highway department requests will need to be made from time to time. However, the PRA is empowered to enter into contract authorizations with the assumption that this money will become available.

Engineers get $295,000,000

For the Corps of Engineers a total of $295,455,500 is provided for construction and planning. This amount includes: General flood control work, $124,764,000; flood control on the Lower Mississippi, $46,000,000; emergency flood control on tributaries of the Lower Mississippi, $500,000; flood control on the Sacramento River, $2,000,000; construction of Fort Peck power plant, $1,505,000; construction of rivers and harbors projects, $52,815,000; and for construction work in the fairly early future on maintenance of existing rivers and harbors projects, $67,871,500.

For the Bureau of Reclamation a total of $145,447,000 is recommended for construction and $11,500,000, including $500,000 for the Colorado River Development, for general investigations and planning. The construction money includes: Columbia Basin Project, $30,000,000; Central Valley Project, $25,000,000; Missouri River Basin, $23,783,600; Davis Dam, on the Colorado River below Boulder Dam, $15,000,000; and Colorado-Big Thompson, $15,000,000.

Other amounts recommended for the bureau are: All-American Canal, $5,500,000; Boise Project, $5,420,000; Provo River Project, $3,102,000; Hungry Horse Dam in Wyoming, $2,000,000; Lugert-Altus Development in Oklahoma, $2,080,000; Palisades Dam in Idaho, $1,500,000; San Luis Project in Colorado, $1,500,000; the Riverton work in Wyoming, $1,500,000; and the Yakima job in Washington, $1,440,600.

Funds listed for the National Park Service include $24,900,000 for construction. This money is earmarked as fol-

(*Continued on p. 4*)

Sanitary men ask planning slowdown

Recognizing the need for a slowdown in public works planning, on account of the uncertainty of material and labor supplies, the Committee on Water and Sewage Works Development, recently announced that it would cease its activities for the present.

The committee was a joint venture by the New England Water Works Association, the Water and Sewage Works Manufacturers Association, the Federation of Sewage Works Associations and the American Water Works Association. It was established in 1939.

With Abel Wolman, former AWWA president, as chairman, the group employed engineers to tour the United States and Canada to urge the necessity of immediate planning of postwar work. "By mid-year of 1945, water and sewage works planning was in progress on the drawing boards of engineers in the country at a rate of about three times its normal frequency in the public works field," the committee said. "A significant number of these projects have gone forward to the contract-letting stage."

Within recent weeks, however, the committee says, it has become evident that price levels, both for materials and labor, are so uncertain that contracts either are let at prices substantially higher than anticipated or contract letting has been deferred.

"In the face of such conditions," the statement said, "the committee agrees that it is not judicious to continue the promotion of water and sewage works planning in areas where planning has not already been started. The committee recommends that the constituent associations allow it to retain its form of organization so that it may serve when and if it appears desirable to resume the inter-association promotion."

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Highways—*Tulsa, Okla.*, will spend $3,000,000 on new alignments and repaving of city streets. . . . *Vermont's* first postwar highway program, to get under way this year, will total $3,000,000 in 32 separate projects. . . . The *Milwaukee, Wis.*, Plan Association proposed a $25,000,000 depressed roadway to extend eight miles from the courthouse west to the county line. . . . *Mississippi* legislators passed measures authorizing issuance of $30,000,000 in revenue bonds to finance road building, and the construction of a $20,000,000 farm-to-market road system. . . . Representatives of 14 *Arizona* counties will meet at *Phoenix* Feb. 7 to consider a master plan for state primary road improvements. . . . *Arkansas* will rebuild Highway 67-70 from *West Memphis* to *Forrest City*. . . . *New Jersey* announced it had provided for $42,000,000 of highway construction during the current year. . . . *North Carolina* prepared to launch a $93,000,000 program on its main and secondary roads.

Water Supply—Mayor C. D. Scully of *Pittsburgh, Pa.*, pointing out that city reservoirs normally hold only a 4-day reserve supply and the city's waterworks machinery is more than three decades old, asked councilmen to consider modernization programs. . . . *Columbus, Ohio*, held up its $5,000,000 improvement program pending results of tests to determine availability of an underground water supply. . . . *Akron, Ohio*, started a $2,100,000 modernization program for its pumping, treatment and delivery system. . . . *San Juan, Puerto Rico*, started work on a $300,000 improvement to its filter plant.

Sewage Disposal—*Columbus, Ohio*, engineers recommended construction of a permanent pilot plant at the municipal disposal plant to test various disposal processes. The present plant uses an activated sludge process.

Construction—The Ozark Mountain Distilling Co. will build a $1,000,000 plant west of *Joplin, Mo.* . . . The American Legion announced plans for a 2,700-capacity auditorium at *Paducah, Ky.* . . . Pacific Mills, Ltd., plans a $1,100,000 paper mill expansion at *Ocean Falls, B. C.* . . . The Government of Iraq announced it would build a $6,000,000 oil refinery at *Baisi*, with British engineers preparing plans. . . . A $13,000,000 power plant will be built near *Wilmington, Del.*, for the Delaware Power and Light Co. . . . The University of Illinois will build a $750,000 veterinary medicine building on its campus in *Champaign*. . . . The Portland Pipe Line Co. will build a $500,000 steel pier at *Portland, Maine*.

Miscellany—The Board of Education of *Memphis, Tenn.*, said it would spend $1,000,000 for school buildings and improvements. . . . *Philadelphia, Pa.*, will spend $5,000,000 to improve Northeast and Southwest Airport. . . . *Jackson, Miss.*, plans a $100,000 swimming pool. . . . The *Pennsylvania* Department of Welfare said it will spend $8,000,000 for its 1946 building program.

Strip-mining impairs town's water supply

Strip mining operations have endangered the quality of the water supply for the city of Wellsville, Ohio, and may ruin other existing and prospective water supplies in that mining district, according to Roger E. Heering, state health director.

In a letter to Governor Frank J. Lausche, Mr. Heering said that operations of a mining company in Bailey Run, a tributary to the Wellsville water supply reservoir, were exposing coal seams in the stream which "cause an acid and turbid water" to be delivered to the reservoir. "Inquiry on Dec. 18, 1945, disclosed that no action had been taken by the operators, to correct the condition, and as a result the city's water now requires the addition of lime in order to make it suitable for drinking," the letter said.

Mr. Heering suggested state action to compel cooperation by the mining company in measures to insure improvement in the city's supply.

Calendar of Meetings

NATIONAL

American Association of State Highway Officials, Oklahoma City, Okla., Jan. 29-Feb. 1.

American Concrete Institute, 42nd annual convention, Hotel Statler, Buffalo, N. Y., Feb. 18-21.

Associated General Contractors of America, Inc., Chicago, Ill., Feb. 18-22.

American Society for Testing Materials, spring meeting, Hotel William Penn, Pittsburgh, Pa., Feb. 26-27.

National Society of Professional Engineers, conference of state presidents of member state societies, and board of directors meeting, Deshler-Wallick Hotel, Columbus, Ohio, March 29-30.

REGIONAL

Colorado Society of Engineers, 30th annual convention, Shirley-Savoy Hotel, Denver Colo., Jan. 31-Feb. 2.

Wisconsin Road Builders' Association, annual meeting, Plankington Hotel, Milwaukee, Wis., Feb. 6-7.

Wisconsin Chapter, Associated General Contractors of America, Inc., and Wisconsin Constructors, Inc., joint annual meeting, Schroeder Hotel, Milwaukee, Wis., Feb. 7-8.

Ontario General Contractors Association, annual convention, King Edward Hotel, Toronto, Ont., Feb. 8.

Ohio Society of Professional Engineers, annual convention, Akron, Ohio, Feb. 14-15.

Iowa Engineering Society, annual meeting, Fort Des Moines Hotel, Des Moines, Ia., Feb. 19-20.

New Jersey Section, American Water Works Association, winter meeting, Hotel Roger Smith, New Brunswick, N. J., Feb. 21.

Minnesota Federation of Engineering Societies, victory convention, Hotel Radisson, Minneapolis, Minn., Feb. 21-23.

Wyoming Engineering Society, annual meeting, USO Building and Plains Hotel, Cheyenne, Wyo., Feb. 22-23.

Ontario Good Roads Association, annual convention, Royal York Hotel, Toronto, Ont., Feb. 26-27.

Ontario Roadbuilding Association, annual convention, Royal York Hotel, Toronto, Ont., Feb. 27.

Michigan Highway Engineering Conference, Grand Rapids, Feb. 26-28.

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Construction workers given pay raises as contractors, unions reach accords

St. Louis hoisting engineers settle strike for 10 percent average boost—Houston, Dallas and Seattle set new wage scales

A 2-month strike of union hoisting engineers which had tied up all construction at St. Louis, Mo., was reported settled last week when contractors and union representatives accepted an agreement for a 10 percent increase in wages. Controversies over wages in two Texas cities also were settled during the week.

At St. Louis, where hoisting engineers had been on strike since Nov. 19 and at one time claimed 100 percent stoppage of all construction work (*ENR* Jan. 3, vol. p. 3) on their demand for an increase of 50 cents per hour, the union and members of the Master Builders Association and the Municipal Contractors Association accepted an increase of 20 cents per hour for operators of major power units, and 15 cents per hour for operators of secondary units.

Although the agreement has yet to be approved by the National Wage Stabilization Board, most union men returned to their jobs Jan. 17.

The union's demand that a master mechanic be employed, at $2.75 per hour, on all construction jobs employing five or more hoisting engineers, was compromised by an agreement that contractors designate one of the hoisting engineers on the job as "working master mechanic", at 25 cents per hour above the scale for other engineers on the job. The contractors also agreed to consider reclassification of several types of secondary equipment operators with a view towards placing them in higher wage brackets.

Bricklayers ask more

Recently, the Mason Contractors' Association of St. Louis and AFL Bricklayers' Union No. 1 made a joint application to the Department of Labor's Wage Adjustment Board, asking an increase from $1.90 to $2 per hour.

A controversy over construction wage increases at Houston, Tex., which the War Labor Board had characterized as "runaway" (*ENR* Jan. 3, vol. p. 3) also was reported settled, when the Wage Adjustment Board awarded bricklayers a 27½ cent per hour increase, and other building crafts 25 cents per hour. Contractors had offered a 12½ cent per hour increase.

Houston bricklayers will now be paid $2 per hour. Other building craft wage scales will be: Carpenters, $1.62½; structural steel workers, $1.87½; plumbers, $1.87½, and painters, $1.50. Common laborers will get 80 cents per hour—a 20 cent increase.

A newly-approved wage scale for the Dallas, Tex., area provides an average increase of $1 per day for construction workers, except carpenters and painters, who received an increase of $1.05 for eight hours. Bricklayers filed a separate application with the Wage Adjustment Board for $2 per hour, although contractors had offered $1.87½. In approving general raises, WAB awarded bricklayers a compromise of $1.83¾ per hour —a 21 cent rise.

Other new rates at Dallas are: Carpenters and painters, $1.42½; asbestos workers, $1.75; lathers, plasterers, tile, marble and terrazzo setters, $1.75; plumbers, $1.75; cement finishers, 1.56½; operating engineers on heavy equipment, structural iron workers and sheet metal workers, $1.62½; operating engineers on light equipment and home insulators, $1.37½; rodmen, $1.37½ and composition roofers, $1.27½.

A new wage scale at Seattle, Wash., increases wages of building trades workers by about seven cents per hour.

Bricklayers, stonemasons, sign painters and plasterers are raised from $1.84½ an hour to $1.91; electrical workers, wood and metal lathers, plumbers and steamfitters, from $1.74½ to $1.81; carpenters, painters and cement finishers, from $1.54½ to $1.61, and building laborers from $1.14½ to $1.21.

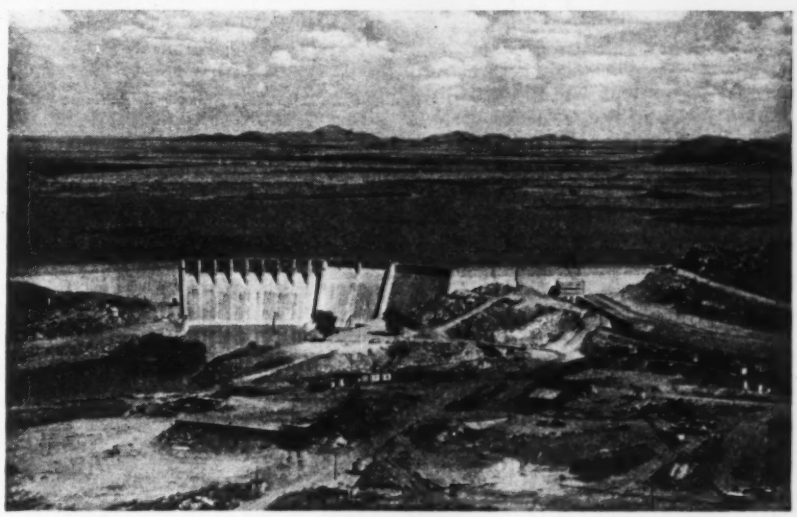
Higher than 1941 average

The new union scale at Dallas is much higher than the average (not necessarily union) wages paid in January, 1941. At that time, bricklayers received $1.50 an hour; carpenters, $1, and ironworkers $1.25. In these three crafts, on which *Engineering News Record* skilled wages averages are based, wages are thus up 25 percent.

Common wage rates compared with the 40 to 50 cents per hour paid in 1941 show an increase of about 50 percent for the current year.

The wage increases in general are in line with a growing trend toward raising construction pay by between 10 and 15 percent, as noted in this journal and other publications over the last several months.

A complete roundup of the general construction labor picture, its trends and possible implications, forms a major section of *Engineering News Record's* Annual Survey and Forecast issue, scheduled to appear Feb. 7.



Altus Dam well on way to completion

With nearly $3,500,000 available for construction contract awards, the Bureau of Reclamation this year expects to advance well toward completion the Lugert-Altus project in southwestern Oklahoma. (ENR, Dec. 27, 1945, vol. p. 860).

The Altus Dam, shown above, is complete except for spillway gates. During 1946 three canals and the Altus pipeline which will deliver water to the city of Altus will be placed under contract.

Planned to have a 200,000 acre-ft. capacity, the reservoir will be used to irrigate the 60,000 acres of land, control floods on the Red River, and supply municipal water to the city of Altus.

Little war damage done to Suez Canal

At the general meeting of the Suez Canal Co. recently held in Paris some interesting facts were brought out concerning the damage suffered by the canal from enemy air raids during the war.

In his report, the president of the company, the Marquis de Vogue, said: "In 64 air raids, 16 transitting vessels, six Admiralty craft (of which two were on loan from the company) and five company craft were either sunk or damaged in the canal, the harbors and Port-Said channel.

"Thanks to investigations carried out before the war, and to the rapid measures taken on the outbreak of hostilities, it was possible to remove or raise the wrecks without delay. Navigation was interrupted for a total of 76 days only, the period of interruption having exceeded a week on three occasions only, in February, March and May, 1941."

Naturally, the war caused considerable interruption in canal traffic for a number of years. For example, in 1942 the average number of transits did not exceed 137 per month, and the total of 1,646 for the year, representing a tonnage of 7,028,000, was a reduction of almost 15 percent from the preceding year.

It was in June, 1943, after the reconquest of Africa, that a resumption of traffic began to take shape, became a certainty almost immediately in September and October, and continued during 1944, despite a slight falling off during the summer. An increase of 60.4 percent was recorded in 1943 in comparison with the minimum for 1942, then in 1944 a similar increase of 60.8 percent, compared with 1943, brought the traffic to 55 percent of the prewar level.

The recovery further developed during the first eleven months of 1945 to such an extent that it was expected that the tonnage for 1945 would reach nearly three-quarters of the average annual prewar tonnage.

President asks $875 million for construction

(*Continued from page* 1)

lows: $15,000,000 for parkways, $7,400,000 for roads and trails and $2,500,000 for buildings and utilities.

The Southwestern Power Administration is provided with $23,000,000 for construction. This money will permit the erection of transmission lines interconnecting Norfork and Denison Dams with Pensacola Dam and with the authorized Bull Shoals and Table Rocks projects of the U. S. Army Engineers.

An amount of $19,701,000 is listed for the Bonneville Power Administration. Of this fund, $15,501,000 is for construction of transmission lines, and appurtenant facilities, and $4,200,000 is earmarked for operation and maintenance.

Recommended appropriations for the Bureau of Indian Affairs contain $8,627,250 for construction, which is a big increase over the 1946 building appropriation. Included in this amount are: $4,700,000 for construction of roads, $1,623,000 for irrigation and drainage work; $1,350,000 for construction of Indian service buildings and utilities; and $954,250 for surveys and investigations.

For the U. S. Geological Survey an amount of $5,000,000 is provided for topographic surveys and mapping and $3,000,000 for water sources investigations. It is also recommended that the Bureau of Mines—another branch of the Department of the Interior—be given $450,000 for the construction of an anthracite research laboratory.

Sufficient money is also provided to permit a large number of projects in Washington, D. C., to go ahead. Construction funds provided for the District government total $17,489,400. The major portion of this money will be spent as follows: Public school buildings construction, $3,790,300; street and bridge construction, $3,815,000; Washington Aqueduct, $1,980,000; sewer construction, $1,972,300; construction of new buildings at the Home for the Aged, $1,200,000; construction of an incinerator, $1,152,600; and construction of additional buildings at the District Training School, $1,006,000.

Other funds provided

The U. S. Coast and Geodetic Survey is supplied with $3,380,000 for the preparation of maps and nautical and aeronautical charts, and $4,775,000 for field surveys. This latter work will involve projects throughout the United States and in all coastal region under American jurisdiction, including Alaska and the island territories.

Other construction money contained in the budget includes $4,930,400, for work in Alaska and $2,000,000 for public works construction in the Virgin Islands. Of the Alaskan fund, $3,790,400 will be spent on roads, $1,000,000 on reconstruction of the Richardson Highway, and $140,000 on construction of bridges and trails.

It is to be noted that no large construction fund is contained in the budget for the Veterans Administration. However, this does not mean that this agency will not carry out a large building program in 1947, as that agency in the calendar year 1946 hopes to award construction contracts totalling $350,000,000 (*ENR* Dec. 27, 1945, vol. p. 849). In a bill (H.R. 5201) introduced Jan. 22, large appropriations for the Veterans Administration are provided, including extensive construction money.

Under this bill the Veterans Administration would receive $147,442,500 for hospitals and domiciliary facilities. Of this amount, $127,668,000 is to cover construction for 13,422 additional beds, including 30 new hospitals. The remaining $19,774,500 is for major alterations. It must also be noted that the Veterans Administration received $242,820,000 in the 1946 fiscal year for construction and that much of this money will be carried over into fiscal 1947.

No money for PBA

Neither is money provided in the budget for planning and construction by the Public Buildings Administration. This omission was made because a bill (H.R. 4276) providing authority for the PBA to construct projects estimated to cost $362,000,000 is now pending (*ENR* Oct. 11, 1945, vol. p. 475).

The Bureau of Community Facilities is another division of the FWA for which no planning funds are provided. This agency plans to ask later in the year for funds further to assist local public works planning groups.

The budget is without any funds for assisting in the construction of public airports through the Civil Aeronautics Administration. However, the Senate has passed a bill supplying $375,000,000 for a 5-yr. construction program and the House has approved $700,000,000 of federal aid over a 10-yr. period. An early compromise is expected.

Funds for assisting in the construction of public hospitals are also missing from the budget. Here again money for this type of construction will undoubtedly be provided under a separate measure as a bill (S. 191) authorizing $375,000,000 of federal aid for a 5-yr. hospital program has already been passed by the Senate.

Neither were requests for construction money for the Navy and the National Housing Agency outlined in the budget. The requirements of these agencies will be made known later.

Harrisburg, Pa.—Gannett, Fleming, Corddry and Carpenter, Inc., engineers, have announced the opening of an office in Mexico City, D. F., Mexico. S. D. Caplan, will serve as representative of the firm in the Mexican capital.

Congress views long list of measures affecting engineering and construction

President and the public seek action on measures affecting labor, housing, airports, roads, hospitals and construction in general

Despite the numerous engineering laws enacted last year Congress is faced with an even longer list of proposed laws relating to the construction industry. The President in his recent annual message requested early consideration of much of this pending legislation to speed reconversion and to clarify the federal government's policy regarding the industry. The general public is also demanding action on numerous bills of major significance to construction.

One of the first bills expected to be passed is that providing federal-aid for airport construction. The House has already approved $700,000,000 of federal-aid over a 10-yr. period and the Senate has passed a bill supplying $375,000,000 for a 5-yr. program. A compromise should soon be reached.

The great housing shortage and the political credit possible in getting a housing bill passed—plus the fact that the President has also recommended such legislation—may result in passage of a law providing federal-aid for housing. Hearings have already begun on the Wagner-Ellender-Taft bill (S. 1592), which makes the National Housing Agency a permanent organization, provides large sums for research and planning, supplies aid for acquiring slum lands for public housing projects, and authorizes federal appropriations to assist construction. Consideration of the Patman Bill (H.R. 4761), placing ceilings on the selling price of new and used housing has also been started. Both measures, in their general form, have the approval of the Executive Department.

Federally-sponsored construction

President Truman in his recent report also requested appropriations for the construction programs of several federal agencies. The amount of money Congress supplies will determine in a large measure whether federally-sponsored construction will go ahead on a grand scale or will be restricted to a low volume until private work begins to taper off. Since these funds are needed for the fiscal year starting July 1, the size of the appropriations should soon be determined.

Federal-aid for a large hospital program, which is desired by the President, is another proposal expected to get early consideration. One bill (S. 191) authorizing $375,000,000 of federal assistance for a 5-yr. construction program, plus $5,000,000 for surveys and plans, has already been passed by the Senate. Indications are that the House will soon consider this proposal. A bill (H.R. 5014) authorizing the Reconstruction Finance Corporation to make loans and grants totalling $500,000,000 for planning and construction of public hospitals and public-health centers has also been introduced.

Four labor bills

Passage of four major bills pertaining to labor and of importance to the construction industry is also sought by the President. He has asked for: (1) Legislation to authorize the creation of fact-finding boards for the prevention of stoppages of work after collective bargaining, conciliation and voluntary arbitration have failed; (2) Enactment of a satisfactory "full employment" bill; (3) Adoption of a permanent fair employment practice act and; (4) Legislation immediately raising minimum wages from 40¢ hourly to 65¢ and to 75¢ after two years. Extensive hearings have already been conducted regarding both the "full employment" bill (S. 380) and the proposal (S. 1282) to raise minimum wages. Congress is being watched closely regarding what it accomplishes in the way of labor legislation and this should result in enactment of one or more of the labor bills.

What course to follow regarding the long list of valley authority bills previously introduced is another major question Congress must answer. Because of the adverse reports of two Senate committees, establishment of an MVA (Bill S. 555) appears improbable at this time. This darkens the outlook for the possible establishment of other authorities. A vote on the MVA issue by the entire Senate may occur soon.

Some months ago President Truman asked for legislation permitting development of the international section of the St. Lawrence River for power production and navigation. He repeated his request in his annual message. Because at least three bills (S. 1331, H.R. 671, and H.R. 1428) have already been introduced, and since public interest in this development is appreciable, an early showdown, which is expected to result in a major congressional fight, would be no surprise.

Hearings have already begun on the request (H.R. 4276) made a few months ago for authorization for the Public Buildings Administration to construct projects estimated to cost $362,000,000. A list of 4,020 "eligible" projects—primarily post offices—were also submitted for approval.

Congress also has before it three major bills (H.R. 519, H.R. 587, and H.R. 4070) pertaining to stream pollution. Hearings were started Nov. 13 and although somewhat similar proposals have been defeated in the past, Washington groups believe that the chances are much better than ever before for passage of this type of legislation, because of the favorable response at the hearings.

A bill (S. 1449) aimed at partial stabilization of the construction industry has also been introduced. This proposal would give the President power to direct federal agencies to accelerate or defer their construction programs. It has not been reported out of committee, and early passage appears improbable because of the long list of other bills claiming attention.

Rural local roads

Other pending legislation pertaining to the construction industry includes: A proposal to place employees of contractors working for railroads under the Railroad Retirement Act; a recommended measure (S. 1720) establishing a National Science Foundation; a bill (S. 1022) supplementing the 1944 Highway Act by authorizing appropriation of $1⅛ billion for construction of rural local roads; and a bill (S. 1426) providing $20,000,000 for a 10-yr. slum clearance program in the District of Columbia, this bill having already been passed by the Senate.

FWA loans finance plans for $1.5 billion work

A tabulation of planning loans made by the Federal Works Agency to communities throughout the United States as of Dec. 1, 1945 indicated that financing has been provided for projects that will represent a total value of $1,575,600,000.

In tabular form, the projects represented, by type and total value of work contemplated are:

	(Million)
Educational facilities	$343.5
Other public buildings	113.4
Highways, roads, streets	64.3
Parks, recreation	94.5
Hospitals, health facilities	72.5
Bridges, viaducts	83.6
Airports	33.6
Miscellaneous	174.7

This total does not include the $595.5 million in sewage and sanitation projects for which planning funds have been awarded. (*ENR* Jan. 17, vol. p. 83).

Tennessee rebuilds road to serve bomb plant

Highway connecting Knoxville and Clinton works carries traffic while being expanded to four-lane road

New roads, and improvements to existing routes are speeding access from Knoxville, Tenn. to the huge Clinton Engineer Works, 18 miles to the west.

On U. S. Route 25W, an existing 2-lane road is giving way to a 2-lane separated highway, and a mile of new road has been constructed to bypass the town of Clinton and speed movement of traffic there.

Work on the main through route, 25W, includes relocation through rock ridge country where extensive grading is necessary for widening to four 11-ft. lanes, which are being placed in two 22-ft. widths with a minimum of 5-ft. median strip between. Traffic is being maintained over the entire route despite reconstruction, since detours are not practical and other routes are too congested to permit closing this main road. The existing lanes are used for traffic while a double lane addition is made, then the old pavement replaced or repaired while the new work carries traffic in both directions.

The 3½ mile section now under construction requires removal of some 25,000 sq. yd. of existing pavement, laid without reinforcing in 1925. The pavement is broken up by excavating shovels without use of breaking equipment or explosives.

Concrete used has 1.45 bbl. of cement per cu. yd. mixed with crushed gravel and river sand. The only reinforcing in the concrete is 2-ft. long, ⅝-in. round rods at 30 in. c. to c. transversly across the centerline of a 22-ft. width. Contraction joints are formed grooves at 20 ft. c. to c. and expansion joints are ¾ in. thick premolded bituminous fiber at 120 ft. c. to c., utilizing shear dowels through the joint.

Trucks haul two 37.4 cu. ft. batches an average of 4½ miles from a rail siding batch plant. The concrete is mixed in a 34E double-drum paver and is spread on the subgrade by the paver bucket, supplemented by some hand work. A double-screed finisher, spanning the 22 ft. width, is followed by a mechanical longitudinal float and a "joint" machine that places the longitudinal center strip and transverse contraction joint. A heavy stable broom is used to impart a rough texture to the finished concrete, behind which joints are edged and a colorless compound sprayed on for curing.

Ballenger Paving Co., Greenville, S. C., is the general contractor and is doing the paving and earth work but the latter is being accomplished with equipment rented and personnel furnished by Neflo L. Teer and Central Engineering & Contracting Corp. of Durham, N. C. On the earth work George Johnson of the Teer organization is acting as superintendent. For Ballenger Paving Co., Jas. R. Chandlee is project manager and Norman Raines is superintendent on paving. Lewis & Bowman of Knoxville are subcontractors for the drainage structures.

Reclaiming old pavement

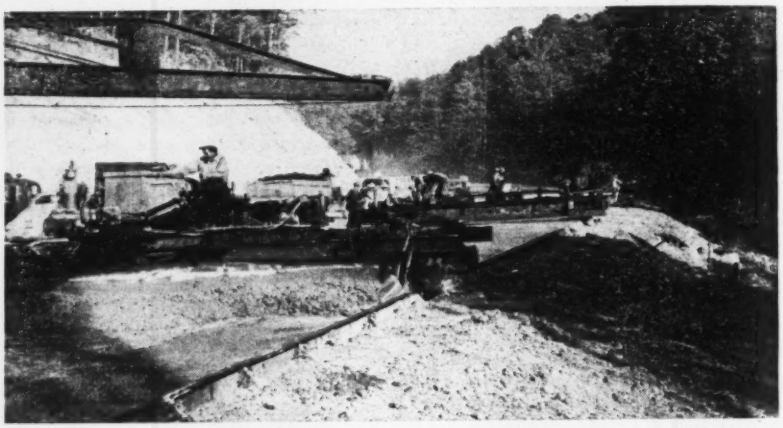
About seven miles of 20-ft. wide concrete pavement placed in 1929 and now quite rough due to uneven settlement of the subgrade and subsequent cracking of the concrete has been salvaged by a bituminous cover. Poor sections of the old concrete were cut out and replaced by building up with bituminous material.

Following thorough cleaning a tack coat of 0.1 gal. of rapid curing cutback asphalt (R.C. 2) was first sprayed on the clean concrete surface. After 72 hours a 2 in. plant-mix binder course of asphaltic concrete was placed and rolled. The material used was 5 percent of 60 to 70 penetration asphalt in about 1,250 lb. per ton of 1 in. down to 100 mesh crushed limestone with a large percentage of ⅜ in. chats. This mix was placed at 300 to 320 deg. F. by conventional pavers and rolled.

After the binder course had been in place for 48 hours, a 1 in. seal course consisting of 45 percent ⅜ in. chats down to fine sand was used with 5.5 percent 60-70 penetration asphalt. This mixture was placed at 240 to 280 deg. F. and rolled for compaction.

Contractor on the resurfacing work is Knoxville Construction Co. of Knoxville, Tenn., which holds a $109,000 contract for the 7½ miles of 18-ft. wide resurfacing. W. Price and J. W. Elam are in general charge and R. J. Allen general superintendent in the field.

For the Tennessee highway department, W. T. Brooks is chief engineer, William N. Rees engineer of design and surveys, O. F. Goetz engineer of construction. C. W. Prayter is division engineer for eastern Tennessee with J. D. Hawley division construction engineer and Elmer Reed assistant division construction engineer.



Above: New concrete pavement, 8 in. thick across its full 22-ft. width, is laid along the existing two-lane road. After the new lanes are completed, the old roadway is resurfaced (lower photo) with bituminous concrete, placed by two pavers.

Almost ready to start Cleveland freeway

Contracts may be let soon on $26,700,000 Willow-Newburg route to speed traffic to center of city

Prospects are bright for contracts to be let and a sizable portion of the work started within the next year on Cleveland's long-planned Willow-Newburg Freeway.

Estimated to cost $26,700,000, the freeway will open up a direct 70-mile-per-hour vehicular route from the southeast area of the city to the downtown section. The total length of the freeway is 6.62 miles, with width of the right-of-way varying from 120 ft. to 200 ft.

Planned for many years

Plans for this freeway have been in the hands of the Regional Planning Engineer's office of the State Highway Department in Cleveland for the last five years. There was some voiced objection on the part of land owners when the route was first announced, but this opposition has more or less disappeared. The Cleveland City Council gave its full approval of the location of the freeway at a meeting on Dec. 10. Now only the formal approval of the Public Roads Admininstration is needed to insure the full amount of money to complete the project.

The freeway was divided into three sections by the Regional Planning Offices. The extreme southeastern section, from the public square in Cleveland, is 1¾ miles in length. On this section, the right-of-way has been obtained by the county at a cost of $1,100,000. Lombardo Bros., Cleveland contractors, were awarded a $1,300,000 contract for grading, drainage and one structure on this portion of the project. As of Jan. 1, the work called for under this contract was 65 per cent completed. Lack of steel is said to be the only factor which may cause a delay in its completion by late spring.

In preparing the right-of-way for paving on this portion of the freeway, the town hall of Cuyahoga Heights was removed, as well as a plant of The Cleveland Wire Spring Co. Five other industries were affected in a minor way.

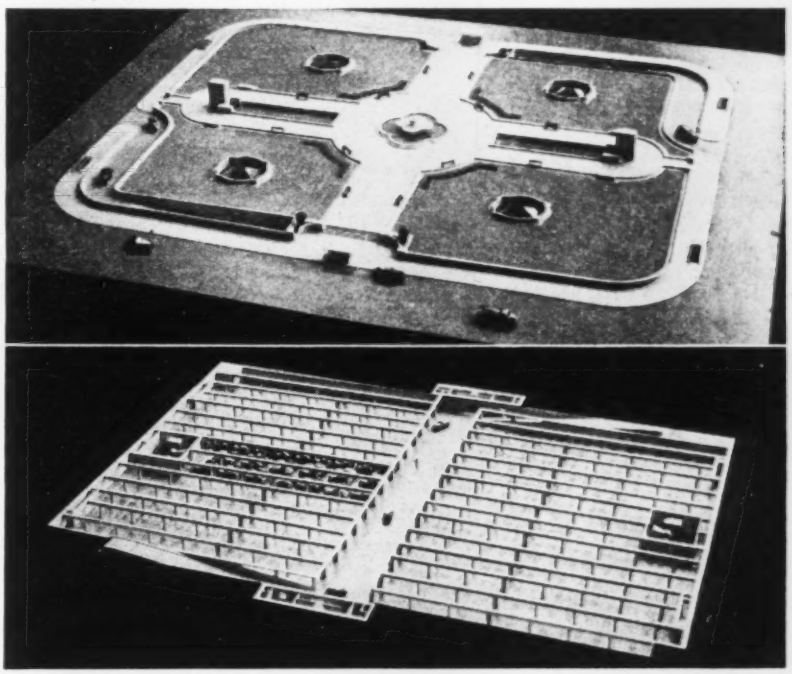
Remove 75 homes

The middle section of the project, 1.6 miles in length, calls for the removal of 75 houses containing 100 dwelling units. The city is negotiating for the right-of-way for this section and has obtained about 10 per cent of it. The total cost of the right of way for this section may be $900,000.

Plans for the paving of these two units and the construction of the 8 bridges for the center section—four of them railroad structures—are 99 per cent completed. Engineers expect paving contracts for these two sections plus the construction of the eight structures to total approximately $3,500,000—the work to be let in five separate contracts.

The 3.27 miles of the freeway, extending from the public square southeast to the center section, passing through a heavily populated but blighted district, call for a total expenditure of $20,000,000, with $5,000,000 for the right-of-way. In all, 450 houses containing 600 dwelling units, and 600 small business buildings must be removed. Eight structures, including one a mile long to span railroad storage and sorting yards, are called for in the plans now on the drafting boards. State planning engineers hope to start work on the plans for this section by June 1, with a year needed in which to complete them. The work for the inner section probably will be let in 15 separate contracts.

One of the city's landmarks, Central Market, is to be razed, with the city administration already committed to building a modern market in the immediate vicinity to house wholesaler's operations.



British engineers develop novel auto-parking scheme

A solution advanced by British engineers for the urgent problem of providing parking space for automobiles in heavily congested urban areas was advanced recently by Building, Engineering and Mechanics, Ltd., of 20 Harcourt House, Cavendish Square, London. Called the "auto-actuated floor space" method, the plan was developed by Harold Auger, civil engineer, and W. W. Baldwin, an economist.

The scheme provides for underground parking areas, with a flooring made of completely mechanized parts that will permit the movement of cars parked on individual "squares" in a checkerboard manner, without use of the car's own motor.

Under the system, the motorist simply drives into the auto park and directly to an open space at the end of a twin track bay, shown in the model (lower photo) above. He may lock the car at that spot.

Using simplified control machinery, attendants move the individual squares forward the length of the bays and then sideways at the end. When the car is called for, it may be moved back from any position on the floor by reversing the machinery or sending it forward to make a complete traverse of the bay.

Advantages claimed include the utilization of 79 percent of the floor space, the need of only one attendant for every 100 vehicles, absence of fumes, lessened possibility of damage to vehicles.

According to reports, many British cities are investigating the possibilities of the system as part of their reconstruction plans for war damaged areas.

Although dollars-and-cents cost figures are not available, developers said the cost of a fully-mechanized unit will not exceed that of non-mechanized buildings of similar specifications and floor area.

"Optimistic" estimates blamed for tunnel deficit

Inadequate initial financing and "over-optimistic" estimates of future traffic recently were named as causes for a $5,787,000 deficit in the operation of the Queens Midtown Tunnel, in a report submitted to the New York City Tunnel Authority.

The report was made by George Spargo, deputy mayor, and general manager for the authority. Mr. Spargo predicted mounting deficits if the tunnel continued to be operated under the existing capital set-up, and suggested as a solution an agreement between the Reconstruction Finance Corp. and the city on a proper refinancing program.

The tunnel was built, starting in 1940, under a $47,130,000 loan from the Public Works Administration, plus an outright grant of $11,235,000. It was estimated that tunnel traffic would reach a total of 16,000,000 vehicles per year within five years—but during the peak year of 1945 only 5,115,071 cars actually used the tunnel.

In the same report, Mr. Spargo declared that the Brooklyn-Battery Tunnel Project, originally estimated to cost $57,000,000, might well cost $5,000,000 more because of increased costs of materials and labor.

He noted that traffic estimates for this project, too, are "on the optimistic side."

Roadbuilders want more surplus equipment now

Comments and questions on surplus equipment kept bobbing to the surface in the sessions of the American Road Builders' Association at Chicago recently. The organization expressed its verdict on Jan. 17, last day of the 43rd annual meeting, in a resolution urging that all construction equipment in the United States not needed by the armed forces be promptly declared surplus and made available to the public through normal trade channels.

Lt. Gen. Raymond A. Wheeler, Chief of Engineers, said that the Corps of Engineers at the start of 1946 held no marked quantity of excess equipment which had not been declared surplus. H. O. Penn, president of the distributors' division, reported that the Corps of Engineers has declared surplus hundreds of millions of dollars of new and used construction equipment which has not yet reached the market. A supporting opinion was offered by Carol Winchester, executive secretary of the Associated Equipment Distributors, who addressed an open meeting sponsored by the manufacturers' division.

Seacoast engineering board proposed in Calif.

Advocates of the preservation and development of California beaches are proposing the formation of a state seacoast engineering board to examine any proposed shoreline developments before they are approved.

Claiming that littoral land requires constant observation the report on a 2-year study recently compiled by a committee, of whom Col. Charles T. Leeds, consulting seacoast engineer for the state Division of Lands was chairman, advised against building of shoreline projects without expert advice.

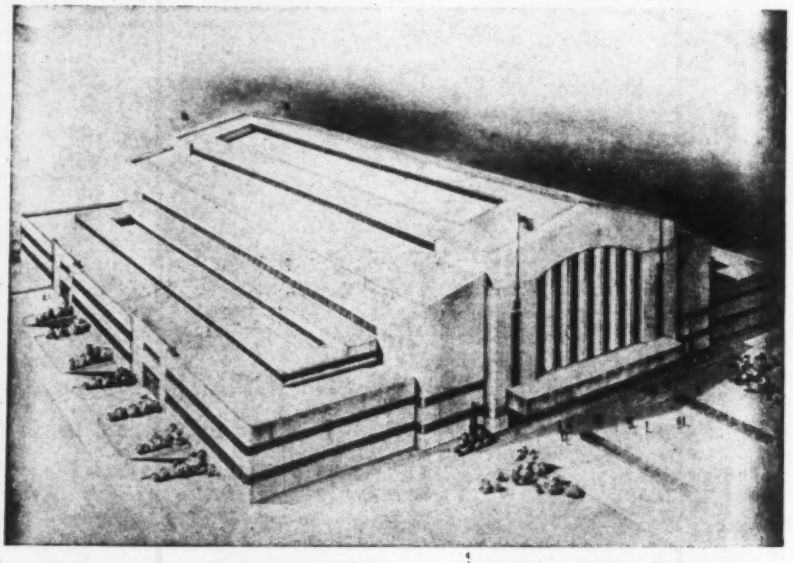
The state's division of state lands authorizes structures built upon tidelands, but where these are transferred to a municipality, "the state cannot prevent one city from building an ocean structure that may so influence waves and current as to damage seriously other communities' shorelines," Dr. Robert Sproul, president of the University of California, said in presenting the report.

Plan spring start for work on Dillon Dam, Ohio

The quarter-mile Dillon Dam on the Licking River, near Zanesville, Ohio, originally planned as a unit of the Muskingum Conservancy District, will be placed under construction this spring. Passage of the deficiency appropriation bill by Congress recently released $900,000 to start work on the $10,000,000 project, which will create a 10-mile permanent lake of 1,500 acres. The Baltimore & Ohio Railroad will relocate its tracks through a 22-mile section of the Licking Valley as a preliminary.

The dam will be 108 ft. high and 1,280 ft. long, contain 1,642,000 cu.yd. of earth fill and concrete, and is designed to take care of seven inches of run-off water over 748 sq.mi. of the Licking's drainage area. The project is expected to be completed in three years.

Though the reservoir would be geared into the 14-dam Muskingum system for flood control purposes, it will be administered by the Army's Ohio River division.



New stock show amphitheater proposed for Denver

The National Western Stock Show Association has announced plans to build a $2,500,000 amphitheater and exhibit hall at Denver, Colo., to house the National Western Stock Show, Horse Show and Rodeo.

The 400 by 400 ft. building will be one of the largest of its kind in the West. A central section in which the roof will be supported on steel arches having a span of 214 ft. will extend the full length of the structure, providing space for an arena 110 ft. by 235 ft., and seating capacity of 8600. The two-story side sections will be of reinforced concrete construction. Space will be provided in them for a restaurant, the stock show exhibits, a refrigerated exhibit room for showing dressed meat, as well as accommodations for 4H Club exhibitors. Space for rodeo equipment and stock, locker rooms, and mechanical and refrigeration equipment will be available in the basement.

The building will be so located that access from highways leading into Denver will be convenient, and ample auto parking space available. The present, nearby facilities of the stock show would be connected with the new building by underground passages. The building would also be available for conventions and athletic events.

Temple H. Buell of Denver is the architect.

Canada consolidates housing controls

Administration of all Canadian federal housing legislation, including the National Housing Act of 1944, excepting Wartime Housing Ltd., has been placed in the hands of a new government corporation in a move to speed easing of housing shortages.

The new body, known as the Central Loan and Mortgage Corp., was established under a recent act of the Canadian Parliament. Wartime Housing, Ltd., a crown company, set up to deal with emergency wartime housing needs, has operated only in areas where war plants are located.

The new corporation is headed by D. B. Mansur, as president. He will be assisted by a vice-president and eight directors, three of whom must be the governors of the Bank of Canada, and the deputy ministers of Finance and Reconstruction in the Dominion government. The remaining five directors, not yet appointed, will represent the five main geographical divisions of Canada.

The corporation is charged with administering the existing emergency shelter regulations—previously under the Wartime Prices and Trade Board; and the home conversion plan under which large houses have been converted, with federal government assistance, into multiple dwellings.

Chief task of the new organization, however, is administration of the National Housing Act, which has been handled by an administration in the Department of Finance. Under provisions of the act, the Canadian government is authorized to make loans totaling up to $100,000,000 to persons wishing to build their own homes. The government is also authorized to set aside $150,000,000 to guarantee loans and losses on loans made by lending institutions for rental housing projects. Under this arrangement the new low rent housing project planned for Toronto has been designed to operate (*ENR* Dec. 27, 1945, vol. p. 852).

State housing aid asked in New York

A proposal that the state appropriate $35,000,000 to finance emergency housing, and recommendations for amendment of tenement-house laws to permit use of older dwelling units now banned were contained in a special message sent the New York State legislature recently by Gov. T. E. Dewey.

The funds would be used largely to finance the conversion of military installations to temporary shelters for veterans and their families—a move already under way in New York City. The money would be taken from a state housing fund that now contains about $120,000,000.

The governor also asked legislators to consider possibilities of changing existing tenement-house laws to permit temporary use of old housing units in New York City, now vacant because they do not conform to the law.

He deplored the necessity for the moves recommended in respect to housing laws, and asked that any changes be so made that they will not permit such old structures to be used more than temporarily. "Basically," Dewey added, "the solution of our housing problem lies in the revival of large scale private building.

"We seek not to compete with the construction industry, but to aid it in every possible way."

Illinois city seeks housing

The city council of Springfield, Ill., recently authorized the city's mayor to enter into a contract with the Federal Public Housing Authority for construction of 500 temporary housing units for the use of veterans and their families.

City officials said the units would be paid for out of federal funds, but did not reveal the exact location of the proposed homes.

Advisory group appointed

Appointment of a housing industry advisory committee, to cooperate with government agencies on a public information program on the housing emergency has been announced by John B. Blandford Jr., administrator of the National Housing Agency.

The committee is an outgrowth of a resolution passed at a recent government-industry-labor conference.

Howard B. Smith, director of the Department of Real Estate Finance, American Bankers Association, will act as chairman of the new group.

Montpelier, Vt.—The Vermont Public Service Commission and the New Hampshire Water Resources Board have authorized redevelopment of Wilder Dam on the Connecticut River, and Army Engineers are considering raising the proposed West Townsend Flood Dam to eliminate the dam at Williamsville.

Hyperion outfall sewer bids all over estimate

All of five bids opened Jan. 9 for construction of a mile-long submarine outfall sewer, from Hyperion into Santa Monica Bay, were over the $2,000,000 estimate prepared by the engineering bureau of the Los Angeles Board of Public Works. (*ENR* Aug. 9, 1945 vol. p. 147) and were taken under advisement.

Lowest of the five bids, that of Atkinson Co., was $3,517,000 for a reinforced concrete pipe line of 12-ft. dia. Of three alternates, only one bid was received for a cast iron pipe, and none for the other alternate, three concrete pipes of the same combined capacity as the 12-ft. pipe.

Board engineers are rechecking their estimates in an effort to ascertain why all five bids exceeded the original estimate—made several months ago—by more than $1,500,000. No decision has been made on the project, and none may be until the outcome of an appeal for state funds is known. A delegation is now meeting with the legislature, seeking a state grant of $12,000,000 to supplement municipal funds already allocated to sewage treatment and connected sewer construction work.

The sewage work was recently ordered expedited as a result of a suit brought by the state against Los Angeles and other municipalities. This sought to bring to a head the long-standing sewage problem which has caused quarantining of beaches near the present outfall sewer at Hyperion.

The new outfall sewer eventually would serve the proposed sewage treatment plant, when that is built, but in the meantime would replace the original sewer, now badly damaged and inadequate.

Start work on Canada's "$100,000-a-mile" road

Work is under way on the construction of the 83-mile Hope-Princeton Highway in southern British Columbia, Public Works Minister Herbert Anscomb said recently.

The $2,892,000 contract for the job is held by the Anderson Construction Co. of Fort William, Ont., and already four power shovels and 50 men are at work on the west end of the road, four miles from Hope.

For its length there will be no costlier project, say engineering experts, who point out that in some places, on account of the nature of the terrain, the figure will amount to $100,000 a mile. Air line distance between the towns is about 50 mi.

Canadian construction conference called

A national joint conference of the construction industry in Canada will be held in Ottawa, Feb. 18, 19 and 20. The meeting has been called by Dominion Labor Minister Humphrey Mitchell who said he would ask employers and employees to nominate delegates.

First announcement of the conference was made at the annual meeting of the Canadian Construction Association in Winnipeg, Man., Jan. 15, by H. P. Frid, contractor, Hamilton, Ont., chairman of the labor committee and head of its 9-man delegation to the continuing National Joint Conference Board.

The last joint conference was held in 1941 and is generally regarded as having been responsible, in large measure, for the remarkable performance of the Canadian construction industry throughout the war, and for the complete absence of labor difficulties during that period.

Toronto voters approve big public works plan

Voters of Toronto, Ont., on Jan. 1, approved by large majority, plans for the city's major postwar public works. The results were as follows:

	For	*Against*
Rapid Transit Plan	79,460	8,592
Don Roadway Scheme	31,882	12,328
Clifton Road Subway	36,256	7,530

The Rapid Transit plan is a $51,000,000 project. Figures for the other projects are not available as yet.

"No parking" for building machines

Parking of construction tools in residential zones has been ruled unlawful in the Boston, Mass., Municipal Court.

Municipal Judge Frank W. Tomasello found the owner of a lot in suburban Roslindale guilty of violating zoning laws by permitting construction equipment to be parked on a vacant lot near his home.

Los Angeles harbor work to cost $10,000,000

Announcement of first postwar construction by the Los Angeles Harbor Commission lists $10,000,000 in projects scheduled to start soon, some at once. The list includes warehouses, new terminals and extensions, a fishing boat anchorage, sewage treatment plant for fish cannery wastes and other improvements.

The first project for which bids will be opened by mid-summer, if not before, are new transit sheds at Berths 179-180. Dog-leg in shape, the sheds will be 120 ft. wide by 740 ft. long. They will be of steel and concrete construction, and are estimated to cost $1,250,000.

Fish canneries located at the Los Angeles-Long Beach harbor have been authorized to construct industrial sewers at Fish Harbor, to cost $250,000, and a sewage treatment plant, to be built by the commission, will complete that improvement.

British plan enlarging of Heathrow Airport

Heathrow Airport, opened Jan. 5 as a commercial field to serve London as a main air terminal, will be enlarged to make it second in area only to New York's Idlewild terminal.

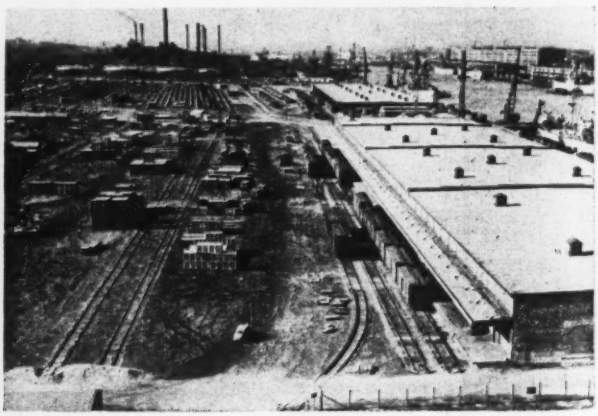
The airport will be enlarged from its present 1,500 acres to more than 4,000 acres. The main runway will be extended to 15,000 ft. and two others to 9,000 ft. each. Special railroad connections to serve the field from London are planned.

Work on the new field—on the site of disused gravel pits and ponds—started last May, and during the last year more than 2 million tons of earth and gravel were excavated, as well as 500,000 cu. yd. of silt. When the three runways are completed, more than 1,114,000 sq. yd. of concrete, a foot thick, will have been put down.

Plan building $5 million Ohio gas pipeline

The East Ohio Gas Co. announced Jan. 16 that plans had been completed for a $5,000,000, 20-in. pipeline extending from the Ohio River to Cleveland. The new line, which would be reduced to 18 in. dia. at Cleveland, will connect with another high pressure pipeline in the city.

The new line will be of advanced high-pressure type, carrying 700 to 1,500 psi. Its capacity will be about 115,000,000 cu. ft. per day.



Boston embarkation port built on harbor mud-flats

Recently released, these photographs show the transformation of former marsh land and tidal mud flats in the harbor of Boston, Mass., into the huge Army port of embarkation. Starting in 1942 with marsh land and water-covered mud as shown in the photo at left, Army Engineers filled in the area by dredging and trucking of fill. The area is immediately to the north of historic Fort Independence on Castle Island.

Construction of the embarkation port involved the tearing up of a street bordering the area to the south, and using the right of way as a railroad embankment to carry connecting trains from railroad terminals two miles away into the port itself. When the Army vacates it, civic officials expect to take over the port.

Maine Bridge Failure Halts Factory Work

On Jan. 11, two "U-bolts" in a stay-rod on a 700-ft. iron bridge across the Penobscot River between West Enfield and Howland, Me., snapped. The west end of the bridge sagged a foot below its normal level. All traffic stopped.

About 1,500 men employed by the Atlas Plywood Corp. and the Northern Kraft division of the Gilman Paper Co., in West Enfield, were thrown out of work, while highway department workers rushed to repair the damage. Almost all of the materials for the mills must be unloaded at railroad sidings at Howland, and then taken across the river by truck.

The bridge, built in 1888, is the only crossing over the Penobscot for nearly 40 miles in any direction from Howland.

Phila. street widening approved by state

The Vine Street highway project in Philadelphia, Pa., which has caused probably more turbulent contention than any similar project in that state for many years apparently has been settled in favor of the plan proposed by the State Department of Highways.

Mayor Bernard Samuel has sent to the city council an ordinance authorizing the Department of Public Works to enter into contracts with the state for the $9,000,000 Vine Street widening project insisted upon by State Highways Secretary Shroyer. The state plan calls for the widening of the thoroughfare from the Delaware River Bridge to the Benjamin Franklin Highway.

The Philadelphia Planning Commission originally opposed the plan in favor of a sunken highway, but later withdrew any official objection to the state plan.

Fought by landowners

A group of civic organizations aggressively battled the state proposal on the grounds that it would simply add to traffic congestion. Secretary Shroyer contended that the original sunken highway plan would be too expensive. At one point he threatened to withdraw state funds from Philadelphia projects unless the city authorities agreed to the state plan.

Mayor Samuel's action thus ends the controversy officially, but a group of civic organizations is still opposing the plan.

Australia to rebuild railroad system

The Government of the Commonwealth of Australia recently announced plans for a $730,000,000 program to rebuild more than 33,000 miles of railroad track and convert rolling stock to operate on standard gage rails.

At the present time seven political subdivisions control sections of the railroad system, with the track divided into six gages ranging from 18 in. to 5 ft. 3 in. The new gage, 4 ft. 8½ in., will be the same as the U. S. standard.

The sum involved—$730,000,000—is equal to about one-tenth of the Commonwealth's total war expenditure.

Route mileage of the various gages now in use is: 6,116 miles of 5 ft. 3 in.; 7,309 miles of 4 ft. 8½ in.; 13,645 miles of 3 ft. 6 in.; and several hundred miles of 2 ft. 6 in., 2 ft., and 18 in.

The total construction work involves conversion of 8,470 miles of the existing track, plus construction of 1,600 miles of new line at a cost of about a third of the total to be spent. The program envisages opening large areas in the northern territories capable of supporting more than 7,000,000 farm animals.

First phase of the project, involving construction of a new line from western New South Wales at Bourke to Western Queensland, connecting with Darwin and with ports on the Queensland coast, will cost about $248,710,000, and take several years to complete.

Conversion of rolling stock will include the construction of 578 new locomotives and 9,746 other items. About 411 locomotives and 26,000 other items of rolling stock must be converted to the new gage.

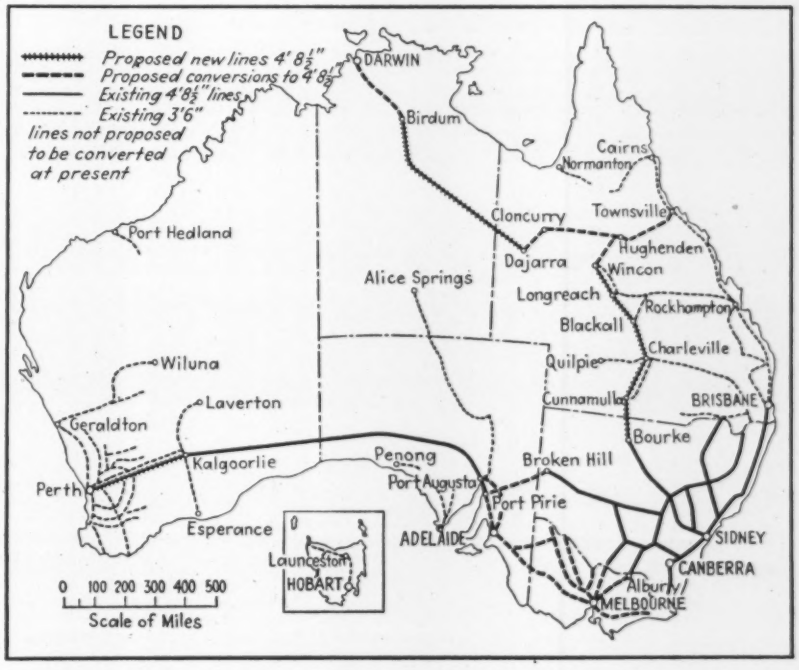
Excepting for cast frames for locomotives and a few special fittings normally imported from the United States, Australia produces all rolling stock and locomotives. Australian railways do not rely on imported fuel, and are the common carriers for all classes of traffic.

The roads carry an annual average of 529,000,000 passengers and an annual average of 40,000,000 tons of freight.

The project is under the direction of Edward John Ward, transport minister, and Sir Harold Clapp, who was formerly associated with the General Electric Co. in the United States.

Site is to be cleared for Cascade Dam

Before Cascade Dam in Idaho can be constructed, a $1,500,000 program for clearing the 7,000-acre site of timber and brush will be initiated by the Bureau of Reclamation. Bids on the clearing of the 16 tracts west of Cascade, which range in size from 40 to 480 acres, are being opened this week.



A major project for the reconstruction of most of Australia's extensive, and varied railway system, has been announced by the Commonwealth's government.

MEN AND JOBS

R. J. Bodman has resigned as director and chief engineer of the Jones-Hettelsater Construction Co., Kansas City, Mo., and has established Milling Engineers, Inc., of that city, to design and construct grain elevators, feed and flour milling plants. **J. H. McDuffie** will be vice-president of the firm in charge of construction operations.

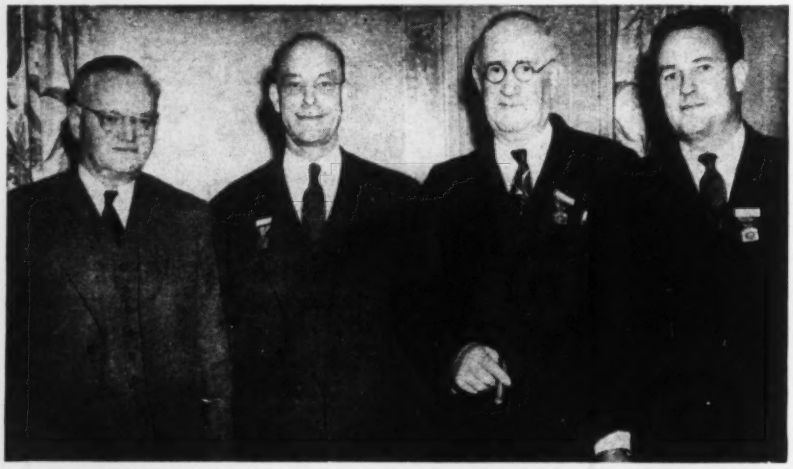
A. R. Nieman, who worked as an engineer on Boulder, Bonneville and Grand Coulee dams, has gone into the general contracting business in Vancouver, Wash., under the name of Nieman Co., Inc.

A. W. Bohner, formerly construction engineer for the Nebraska Department of Roads and Irrigation, has been appointed engineer of maintenance.

County engineer and road superintendent of Peterborough County, Ontario, **D. C. Macivar** has resigned to accept a similar job at Brockville for the united counties of Leeds and Grenville.

Don W. Robins has become city engineer of Compton, Calif., after 18 years in the engineering office of the public service department of Los Angeles. He is a specialist in hydraulic engineering.

Ralph H. Downing, specialist in the design and construction of municipal waterworks systems, has established a general contracting business, including waterworks and equipment installations, in Columbus, Ohio.



The American Road Builders' Association begins 1946 under leadership of President JAMES J. SKELLY, standing here with three division presidents at the recent annual meeting in Chicago. Left to right are NATHAN L. SMITH, Baltimore, president, municipal division; PAUL B. RYNNING, Medford, Ore., president, county division; Mr. Skelly; CHARLES W. SMITH, Pensacola, Fla., president, contractors' division.

Above: left to right: G. W. McALPIN, state construction engineer for West Virginia; E. L. BAILEY, commissioner of highways for West Virginia; G. T. McDONALD, engineer-director of the Georgia State Highway Department, and W. B. HARTSFIELD, mayor of Atlanta, Ga., exchange greetings at a recent convention at Atlanta.

K. M. Wallace has been appointed county engineer for Lyon County at Rock Rapids, Iowa, to succeed **E. B. Carson,** who recently resigned to join the Barton-Warner Co. equipment distributors at Sioux City, Iowa. Mr. Carson was the Lyon County engineer for 13 years.

J. M. Nagle, former municipal public utilities director for Houston, Tex., has been appointed acting city manager, succeeding **John N. Edy,** resigned. Mr. Nagle holds a civil engineering degree from Texas A. and M. college, and has served Houston several years as city engineer and director of public works. In 1939, he resigned to become flood control engineer for Harris County.

Edward A. Smith, in the city engineer's office of Denver, Colo., for 35 years, has been appointed acting city engineer, succeeding the late City Engineer A. K. Vickery. Mr. Smith was graduated of the Leland Stanford University school of engineering in 1903. Since 1923 he has been chief deputy engineer for Denver, in charge of construction.

Forrest R. Easterday, formerly of Tacoma, Wash., has been appointed Pacific County engineer at South Bend, Wash., to succeed **R. E. Wood.** A civil engineer and land surveyor, he has had 37 years' experience, largely in Western Washington and Alaska.

George W. Simons, of Jacksonville, Fla., has been employed as planning engineer for Pensacola. He has had much experience in this work for other cities.

Malcolm B. Edwards has resigned as deputy Pacific County engineer at South Bend, Wash., to enter into partnership with **R. E. Woodward,** his former chief, in private practice at South Bend.

Roy Warnock, engineer at the city light plant for the last year, is the new La Crosse, Kan., city manager. He succeeds **Jesse C. Moser,** city manager, and city clerk for the past thirty years, who has retired.

James S. Devlin, assistant chief engineer, Allegheny County, Pa., public works department, has been appointed director of public works for Pittsburgh. Devlin, who will succeed **Frank M. Roessing,** has been city engineer since 1916 and will direct 2500 employees.

L. M. Hoskins, formerly assistant construction engineer for the Missouri High-

way Commission at Jefferson City, has been appointed Division 1 engineer at St. Joseph, Mo. He has been with the department for ten years.

A. M. Nash has been appointed principal highway engineer in California, in charge of surveys and plans. He is being transferred to Sacramento from Eureka where he has been district highway engineer for two years.

L. J. Wright, assistant Skagit County engineer at Mount Vernon, Wash., has resigned after 25 years continuous service. He will open a general engineering office at Mount Vernon with **Frank Gilkey,** also a former county engineer.

W. A. Spell has been appointed engineer of maintenance of way, Western division of the Atlantic Coast Line at Atlanta, Ga.

James B. Wilson recently resigned as city engineer of Louisville, Ky., and has been appointed acting director of works, to take the place of Frank Hill, resigned.

The appointment of **Richard L. Steiner,** holder of a master's degree in city planning from the Massachusetts Institute of Technology, to the directorship of the Baltimore, Md., Land Development Commission has been announced.

John Conzelman and **F. R. Martin** have announced their association as consulting engineers on civil or mechanical engineering work at St. Louis Mo. Mr. Conzelman is a graduate of Washington University and Mr. Martin of Rose Polytechnic Institute.

Frank C. Cave, Bismark, N. D., has been appointed acting bridge engineer for the North Dakota state highway department to succeed **Clifford Johnson,** who resigned recently.

Ronald C. Freeman, who has been maintenance engineer for the North Dakota state highway department at Devils Lake for seven years, has been appointed division engineer for that department and is at Williston. He succeeds **G. E. FitzGerald,** division engineer for the past eight years, who resigned recently to enter private business.

John H. Bernhard, international authority on inland waterways, has been engaged as consulting engineer by the Boston, Mass., Port Authority. He was consulting engineer for the USSR on inland waterways and assisted in preparing plans for the navigation section of the second "Five Year Plan." He represented Russia at the international navigation conference at Venise in 1932.

Back to Civilian Activity

William A. Hardenbergh, colonel, who was chief of the Army Sanitary Corps for the last five years, has returned to *Public Works* magazine as vice president and editor.

J. S. Waldrep, commander, CEC, USNR, consulting engineer, has opened an office for municipal and structural engineering in Oklahoma City, Okla. He was formerly city engineer at Oklahoma City, leaving in 1940 to act as chief engineer and chief of operations of the Ordnance plant at Anniston, Ala.

Don Hub, lieutenant j.g., USNR, has been appointed assistant regional control officer, Bureau of Reclamation, at Billings, Mont.

Laverne J. Schiltz, recently discharged from the Army after three years, has returned to his former position as county engineer of Dubuque County, Iowa.

Lloyd K. Clark, lieutenant colonel, after nearly five years of Army service, has returned to his former place as director of the division of sanitary engineering, North Dakota department of health, Bismarck. **Jerome H. Svore,** who has been acting director, will resume his former position of senior sanitary engineer.

Burr E. Adams, lieutenant colonel, Corps of Engineers, will be located at Hot Springs, S. D., where he will take charge of engineering work on the Angostura irrigation reservoir.

G. N. McQuern, captain, Corps of Engineers, has been appointed county engineer of Warren County, Indianola, Iowa to succeed **S. J. Melson,** who resigned after nine years. Mr. McQuern was county engineer of Cass County, Atlantic, Iowa.

H. Harry Harrison, major, traffic engineer when he left the Illinois Division of Highways, has returned as assistant highway engineer, bureau of maintenance, after 36 months overseas.

C. A. Hamlin, lieutenant colonel, now office engineer, bureau of construction, returned to the Illinois Division of Highways, Springfield, after 42 months in Iceland, England, France, and Germany. During the Battle of Germany, he was with the Military Government office in Saarland and Bavaria.

Harold F. Gerold, commander, CEC, USNR, of Sandusky, veteran of both world wars, has been appointed division engineer of Division III of the Ohio State Highway Department.

J. F. Arthurs, Marshalltown, Ia., has resumed his former post as county engineer of Marshall County, after four years of Army service.

Marlin C. Young, engineer-estimator, has returned to his position with Batson-Coal Co., Inc. of West Point, Ga. He was recently discharged from duty in the United States Naval Reserve.

Raymond L. Stevenson, lieutenant, CEC, USNR, has resumed his former position as county engineer for Black Hawk County, at Waterloo, Iowa.

J. C. McKibbin, major, Corps of Engineers, is in Belvidere, Ill., to lay the groundwork for an engineering survey of the Koshwaukee River. McKibbon is connected with the Illinois division of waterways.

Above: Four members of the same family are now associated as the JOHN A. McPHERSON Co., Greenville, S. C., consulting engineers. Seated at the desk with his father is BRUCE McPHERSON, and standing are JOHN and RALPH. All three sons recently returned from military service.

ENGINEERING SCHOOL NEWS

Sanitary engineering department created at Johns Hopkins—Transfer students restricted at Colorado—Tennessee offers evening courses

Johns Hopkins University has announced the creation of a separate department of Sanitary Engineering, to be headed by Dr. Abel Wolman. The new department will devote its activities primarily to postgraduate training. The undergraduate curriculum in this department will be essentially that of civil engineering. The work of the new department will be extended and integrated with those of the departments of biology and chemistry and with instruction in the school of hygiene and public health. The plans call for rapid elaboration of facilities for graduate study in sanitary engineering, including the provision of laboratory facilities in conjunction with the departments of chemistry and biology.

It is also announced by Johns Hopkins that the late Mrs. Ida Eno Carner left $10,000 to the university to establish the Ambrose Howard Carner Scholarship, to honor her husband, who died in 1909. He was a civil engineer and served in Mexico and the West Indies for the Barber Asphalt Paving Co. Under the terms of the will, the net income is to be applied to the education in civil engineering of a young man who is a native born citizen of the United States of America, selected by the school of engineering of the university.

Two former faculty members will return on Mar. 1 to the college of engineering, University of Colorado, according to C. L. Eckel, dean of engineering. They are Leo C. Novak, who served as a lieutenant colonel in the Corps of Engineers, U. S. Army, on the construction of the Ledo Road in Burma. He will be an assistant professor of civil engineering. Lt. Robert E. Rathburn, of the U. S. Navy, who saw action in the Southwest Pacific, will return as an instructor in civil engineering.

George C. Ernst has joined the University of Nebraska as associate professor of civil engineering. He was recently with the Forest Products Laboratory at Madison, Wis., where he was in charge of the timber mechanics laboratory. Mr. Ernst was graduated from the University of Michigan with honors in 1929 and received the degree of master of science in civil engineering from Iowa State College in 1932. He previously taught at Iowa State College, The University of Maryland and Syracuse University, where he was assistant professor of civil engineering. He left Syracuse to assume the position at the Forest Products Laboratory at Madison.

Effective Mar. 1, the college of engineering of the University of Colorado will restrict the entrance of transfer students on the following basis: Those having less than a "C" average will not be admitted. Students, both civilian and ex-service men and women, having an average grade midway between "C" and "B", or above, will be admitted without qualifications other than that they are transferring from an accredited university. The admission of transfer students having an average grade above "C" but less than midway between "C" and "B" will be subject to a review board composed of members of the college of engineering faculty.

A series of evening courses will be offered at Memphis, Tenn., by the extension division, University of Tennessee, in cooperation with the Engineers Club of Memphis. The courses constitute a portion of the curriculum required of all engineering students during the first year of their course.

Engineering has regained its position as the largest school at Oregon State College this term, as returned veterans have enrolled in that school in large numbers. With 769, compared with 199 a year ago, engineering shows a 286 per cent increase.

Boris W. Boguslavsky has been appointed professor and head of the department of civil engineering at the University of Akron, Akron, Ohio.

William E. LaLonde Jr., who recently rejoined the faculty of the Newark, N. J., College of engineering after four and a half years service in the Navy, has been named chairman of the civil engineering department. Professor LaLonde held the rank of commander in the Naval Reserve when discharged. Prof. William Hazell, Jr., has been made associate dean and director of admissions.

Prof. Frederick H. Fox is back at the college of engineering of Tulane University, New Orleans, La. His service record includes 28 years in three different branches of the U. S. Army, and action in both world wars. In the first war he spent two and a half years in the Corps of Engineers, and was awarded the Victory Medal. He also now wears the American campaign ribbon, the European theater campaign ribbon with two bronze stars, and the American defense medal. He has also received a British citation for distinguished service with the British in Algeria and Tunisia during the North African invasion.

Press Assn. Photo

Ammunition blast ruins highway paving

Explosion of the cargo of an ammunition-laden U. S. Navy truck recently tore these holes in the concrete pavement of the main coastal highway near San Diego, Cal. Engineers stand in the largest of two craters blasted into the pavement, while naval personnel cluster around a second crater (foreground). Force of the blast is indicated by the location of wreckage of the truck, visible at right of the picture.

New engineering set-up proposed for Phoenix

In Phoenix, Ariz., a public administration service report has advised that the city's various engineering groups be merged into a public works and utilities department, headed by a trained director who will report to the city manager. The present system allows department heads of each of the city's engineering activities to deal separately with the city manager.

Under the plan advanced, the department would comprise seven divisions: engineering and administrative, water and sewer, streets and sanitation, inspections, maintenance and stores, transportation, and airports.

Particularly stressing changes needed in the water and sewer system, the agency pointed out that under the proposed scheme, the division head would possess the authority needed to co-ordinate sewage collection and treatment systems, and to handle sewer line repairs in emergencies. The report disclosed that at present a peculiar situation exists in which Phoenix's sanitary sewer system maintenance is in the water department, storm sewer operation is under the street department, and the sewage treatment plant is run independently.

Brazilian Engineer in U. S.

Lt. Gen. Raymond A. Wheeler, Chief of Engineers, U. S. Army, (left), shakes hands with Brig. Gen. Francisco B. F. de Oliviera, Chief of Engineers, Brazilian Army.

General de Oliviera, accompanied by a staff of five officers, is visiting the United States to study U. S. engineering methods. The group will visit Army projects in all parts of the United States.

Civil service lawsuit halts S. F. projects

When San Francisco civil service engineers filed a suit last month to contest city officials hiring private engineers on designs for civic projects, they are said to have delayed several major building jobs.

The original disagreement was over the retention of Clyde Kennedy, consulting sanitary engineer, by Harry Vensano, public works director, to submit designs for an industrial sewage plant (*ENR*, Oct. 11, 1945, vol. p. 474). This was settled by City Attorney John J. O'Toole, who ruled that $70,000 be paid to Kennedy.

City civil service engineers argue that specifications for city works are within their province, and that Kennedy's contract is illegal. Meantime, five projects, costing $5,145,000, and including the sewage plant, are being held up. The suit may be taken directly to the state Supreme Court instead of through the lower courts because of the pressing nature of the jobs, one of which is a vitally-needed $1,250,000 juvenile detention home.

Watching developments closely is the Association of Construction Engineers of California, who have retained John L. McNab as their attorney. Vensano has announced he will not contract with private engineers for any services until the suit has been settled.

Underground parking on Boston Common proposed

Plans for a privately financed and operated automobile parking development under the ball park and parade ground on Boston Common, to accommodate 10,000 cars daily, have been filed in a bill with the Massachusetts legislature. The approximate cost of the project is $4,000,000.

William J. McDonald, the author of the proposal, said the bill would give the city the right to lease the ground to private interests.

Plans for the project provide six 3-level parking units with ramp approaches. Double ramps are proposed at Beacon and Charles streets, at Boylston and Charles streets, and at the common's half-way mark on Charles street, facing the entrance to the Public Gardens.

An underground moving sidewalk would be provided on all levels, heading towards the shopping district. The pedestrian entrance and exit would be on Tremont Street at West Street where there would be an escalator service.

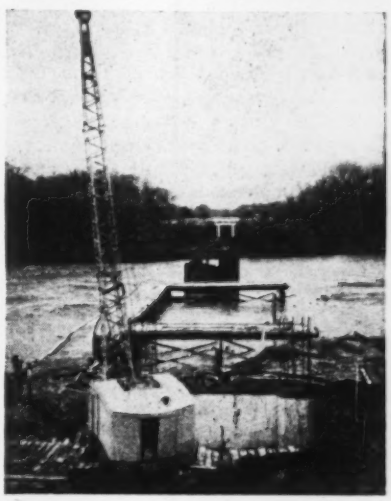
OPA sanctions price rise on waterworks equipment

Rises in the price of a large class of machined equipment and materials used in waterworks and water supply systems were recorded last week, under terms of a recent Office of Price Administration order releasing the items from control ceilings.

A partial check of manufacturers last week indicated that prices on small sizes of valves will increase in price approximately 10-12 percent.

The OPA order, No. SO-129, grants exemption from price controls on machine parts, industrial materials and services, including valves and other waterworks equipment. The order became effective Jan. 1.

Manufacturers had asked the price relief on the ground that average cost increases of 46 percent have occurred in many plants.



Resume S. C. bridge job

The South Carolina Highway Department has resumed work to complete a new highway bridge across the Great Pee Dee River east of the town of Darlington on State Route 34. Work has been started on the nine spans for the main river crossing. Remaining to be constructed are eight piers, two 30-ft. reinforced concrete beam spans, two 60-ft. steel I-beam spans, and five continuous plate girder spans totalling 555 ft. in length.

Contract for the substructure work is held by the Bowers Construction Co., Raleigh, N. C., concrete deck construction by McMeekin Construction Co., Cheraw, S. C., and steel superstructure by the Nashville Bridge Co., Nashville, Tenn. R. S. Hills is resident engineer for the department.

Before war conditions required the project to be shut down, F. A. Triplett Co., Chester, S. C., had completed the approaches.

FHA to set rent ceiling on new housing units

The Office of Price Administration has delegated authority to the Federal Housing Administration to establish ceiling rents on housing planned for rental and built with the priority assistance that became available Jan. 15 (*ENR* Jan. 10, 1946, vol. p. 13). Ceilings also will be set on dwellings for which mortgage insurance has been granted by FHA. Builders will be able to get rent ceiling commitments at the same time they obtain priority aid or mortgage insurance assistance. The ceilings will be set on the same basis as the OPA which has been establishing ceilings on new rental units since Nov. 23, 1945. The FHA is instructing its field offices to establish rentals for such newly-built units in all OPA rent control areas at not exceeding 20 percent above rentals on comparable properties as of the date rents were frozen in that area. The OPA, in turn, automatically will accept those rental rates as the maximum legal rents. Owners of the projects will be required only to file a registration statement with their local OPA rent office within 30 days after the housing accommodations are first rented. The rent listed on the registration statement, if within the FHA rental commitment, will become the maximum legal rent.

This procedure provides due allowance over comparable rents for increases in building costs since 1939.

Get additional bids on Tucumcari project

An additional step toward completion of the 45,000-acre Tucumcari Reclamation Project in New Mexico was made recently when bids were opened on two more phases of its construction. Low bid for work to be done on the Conchas and Hudson Canals irrigation systems was $285,865 from Clyde W. Wood, Inc., of Los Angeles, with A. S. Horner Co. of Denver submitting low bid of $252,934 on the building of earthwork and structures of the canals.

According to Commisisoner of Reclamation Michael Straus, the bureau's schedule calls for delivery of water to about 21,000 acres in the fiscal year 1946, and to 17,000 acres in 1947. So far, construction has progressed on 40 miles of the 75-mile Conchas canal and laterals to allow water delivery to 7,000 acres.

The Conchas reservoir, created by a dam built by the U. S. Army Engineers on South Canadian river 30 miles west of the project, furnishes the water for the irrigation.

Reclamation planning headed by J. W. Dixon

John W. Dixon, formerly engineering assistant to the Commissioner of Reclamation, has been appointed director of the branch of project planning for the bureau. He has been acting director of the branch since Oct. 11, 1945.

Commissioner Michael W. Straus said that the branch is responsible for coordination of the various basin and sub-basin reports for the development of western rivers. It develops reports that will be adequate in scope and content for action by Congress.

Before joining the bureau's staff in 1945, as engineering assistant to the commissioner, Mr. Dixon served as head engineer with the War Production Board. A graduate of the University of Iowa, he is a native of Burlington, Iowa, and served about 13 years with the Corps of Engineers in connection with work on the Mississippi River and the tributary dam system, prior to joining WPB.

Form new Pacific Coast engineer, building firm

Formation of a new engineering and construction firm drawing its key personnel from the Bechtel and Bechtel-McCone interests, has been announced at San Francisco, Calif. The new organization, known as Bechtel Brothers McCone Co., has established offices at 220 Montgomery St., San Francisco, and in the Edison Bldg. Los Angeles.

President is W. E. Waste, formerly general manager of Marinship Corp.

Other officers include: J. P. Yates, formerly general manager, Bechtel-McCone Corp., aircraft division, executive vice-president; V. W. Rosendahl, formerly general manager, W. A. Bechtel Co., executive vice-president; Jerome K. Doolan and V. G. Hindmarsh, both formerly of Bechtel-McCone Corp., vice presidents. Mr. Yates is resident in Los Angeles as executive vice-president.

G. E. Walling has been named treasurer, and J. D. Trimmell, secretary.

JOBS OF THE WEEK

HOSPITAL, New York, N. Y.

Turner Construction Co., New York, N. Y., has been awarded a contract to construct a 13-story building for the Sloan-Kettering Institute for Cancer Research for Memorial Hospital, New York, N. Y. The estimated cost is about $2,000,000. Skidmore, Owings & Merrill, New York are the architects.

HIGHWAYS and BRIDGES, State of Sinaloa, Mexico

State of Sinaloa, Culiacan, will construct and repair highways and bridges, including extending West Coast Inter-American Route and new highway to Durango, using own forces. Cost is $3,600,000.

DWELLINGS, Monterey Park, Calif.

Kaiser Community Homes, Inc., Los Angeles, Calif., will construct by its own forces 500 dwellings to cost about $2,500,000.

RESEARCH LABORATORY, Whiting, Ind.

Standard Oil Co. of Indiana, Chicago, Ill., awarded a contract for a 3-story, administration and chemical building, 1 and 2-story pilot plant, and a 3-story laboratory to Gus K. Newberg Co., Chicago, Ill. The estimated cost is $2,000,000. Holabird & Root, Chicago, are the architects.

IMPROVING ROAD, California

State Highway Department, Sacramento, awarded a contract for grading, concrete and asphaltic paving 11.9 miles in Sonoma and Marin counties to A. G. Raisch Co. and Harms Brothers, San Francisco, at $1,555,096; 8.4 mi. road in Monterey County to A. Teichert & Son, Inc., Sacramento, at $795,692. G. T. McCoy, Sacramento, is the state highway engineer.

ROLLING MILL, West Leechburg, Pa.

Fort Pitt Bridge Works, Pittsburgh, Pa., has been awarded a contract for a 1-story, 500x100 ft. rolling mill for Allegheny Ludlum Steel Corp., Brackenridge. The estimated cost is about $3,000,000, including equipment. E. L. Huff, is the company engineer.

IMPROVING ROAD, California

Fredericksen Brothers Construction Co., Emeryville, will grade and pave a 6.1 mi. road in Solano County for the State Division of Highways, Sacramento, at $1,035,012. G. T. McCoy, Sacramento is the state highway engineer.

Note—Additional bidding and contract news on many projects large and small, including the above items, appear in the Construction News section beginning on page 18.

OBITUARY

H. C. Maurer, 53, first president of the Clay Sewer Pipe Association, Columbus, Ohio, and of the National Clay Pipe Manufacturers, Inc., of Chicago, Ill., died at Bexley, Ohio, Jan. 16. Born in Loudonville, Ohio, he was graduated from Wooster College. Previous to becoming president of the manufacturers association, Mr. Maurer had been employed successively by the Universal Sewer Pipe Corp. of Cleveland and the Vitrified Products Co. of Akron.

Col. John C. Gotwals, 62, engineer commissioner of the District of Columbia from 1930 to 1934, died Jan. 15 at St. Louis, Mo. A civil engineer graduate of Pennsylvania State College, he entered the Engineer Corps as a second lieutenant in 1913. In the first world war he served with the 1st Engineers in France and was commander of the AEF searchlight depot, and later commanding officer of the 46th Engineers. On his return he was made president of the Board of Road Commissioners of Alaska. In 1924 he was named district engineer of the St. Louis District and six years later became engineer commissioner of the District of Columbia.

Thomas Holahan, 88, a civil engineer and founder and president of Thomas Holahan, Inc., paving and sewer construction contractors, died in Rochester, N. Y., Jan. 16. Until his death he had been active in the business which he established in 1882 as a sideline to his regular job as an engineer for the New York Central railway system.

George Mustin Lehman, 82, former chief engineer for the Lake Erie and Ohio River Canal Board, and a flood control expert, died at Philadelphia, Pa., Jan. 19. He was principal assistant engineer in charge of surveys and estimates for the Lake Erie and Ohio River canal from Pittsburgh to Lake Erie in 1895 and 1896. At one time Mr. Lehman was engineer on the river front improvement and river-rail terminal plans of the Department of Public Works, Pittsburgh.

Phillips B. Motley, 74, retired engineer of bridges for the Canadian Pacific Railway, died in Montreal Jan. 13. Mr. Motley went to Canada in 1892, to join the C.P.R.'s engineering department. In his 45 years with the company he was associated with the building of many of the large bridges on the system, including that between LaSalle and Caughnawaga over the St. Lawrence River.

Paul A. Babcock, 67, died Jan. 22 at Quincy, Mass. A graduate of Massachusetts Institute of Technology, 1900, Mr. Babcock was associated with drainage projects in New Orleans, La., and with engineering construction projects in various parts of the country previous to his retirement two years ago.

George H. Seitz, 63, resident engineer at Reading, Pa., for the Reading Co. died Jan. 17. Mr. Seitz started with the railroad in 1904 and supervised the construction of the $3,000,000 Reading repair shops 15 years ago.

W. Rodman Wharton, 92, retired consulting engineer died at Easton, Pa., Jan. 8. He was consulting engineer for the Taylor Wharton Iron Works when he retired.

Henry C. Whiteling, 60, a former engineer with the Philadelphia, Pa., bureau of highways died Jan. 12. He retired from the bureau in 1941 after 16 years service.

Wilbur F. Smith, 63, consulting engineer in Philadelphia, Pa., for 34 years, died Jan. 20.

Henry Emmett Smith, 51, recently appointed engineer of maintenance of way, Canadian National Railways, at Toronto, Ont., and formerly district engineer at Montreal died Jan. 15.

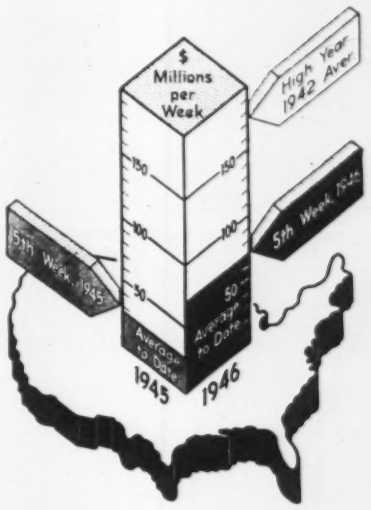
E. Perc Miller, 62, who had been associated with the city engineer's office of Syracuse, N. Y., for more than 40 years, died Jan. 14.

James B. Lockwood, 82, consulting civil engineer, died Dec. 2 in Seattle, Wash. He was the first president of the Puget Sound Bridge & Dredging Co.

Herman M. Bause, 55, a founder of the Marshall Construction Co., New York City, died in White Plains, N. Y., Jan. 21. Mr. Bause took a civil engineering degree from New York University in 1912 and had been engaged in the construction business in the metropolitan area ever since.

Donald A. MacArthur, 56, of the MacArthur Construction Co. Ltd., died at Russel, Ont., Jan. 16. Prominent in eastern Canada construction work, he carried out considerable work for the Department of National Defense for Air at Rockcliffe and other stations during the war.

CONSTRUCTION ACTIVITY



As Reported this week to...
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

	Week of Jan. 31 1946	Cumulative 1946 (5 wks.)	Cumulative 1945 (5 wks.)
Federal	$3,357	$40,173	$60,117
State & Mun.	14,285	70,641	17,027
Total Public	$17,642	$110,814	$77,144
Total Private	52,555	237,463	39,765
U. S. Total	$70,197	$348,277	$116,909

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Type of Work	Dollar Volume (Thousands) This Week	Cumulative 1946 (5 wk.)	Cumulative 1945 (5 wk.)
Waterworks	$1,287	$5,298	$4,133
Sewerage	264	2,453	3,952
Bridges	2,155	10,159	4,158
Highways	8,805	35,956	8,326
Earthwork, Waterways	913	27,839	1,298
Buildings, Public	3,840	22,517	35,966
Industrial	27,980	106,794	28,560
Commercial	21,442	118,202	5,590
Unclassified	3,511	19,059	24,926

NOTE: Minimum size projects included are: Waterworks and waterway projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1946 (5 wk.)	Cumulative 1945 (5 wk.)
NON-FEDERAL	$92,466	$107,734
Corporate Securities	45,811	5,420
State and Municipal	46,655	102,314
FEDERAL	158,320	77,137
Total Capital	$250,786	$184,871

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost	Jan. '46	316.32	152.05
Building Cost	Jan. '46	242.23	130.94
Volume	Dec. '45	163	71

CONSTRUCTION REPORTS

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ELSIE EAVES, Manager *DARWIN R. DAY, Statistics* *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

BIDS ASKED

Bids Asked February 5

Mich., Dearborn—City, M. A. Stevens, clk., Municipal Bldg., Schaefer Rd. and Michigan Ave., 725 ft. 12 in. watermain, Class 250, 225 ft. 12 in. Clow-National mech. joint c.i. water pipe Class 250, 95 ft. 8 in. watermain, Class 250. Rotunda Dr. west of Eastham.

Bids Asked February 6

O., Spencer—Village, K. D. Firestone, mayor, Village Hall, dam and grading for municipal water plant and sys. $115,000. P. W. Elwell, 5005 Euclid Ave., Cleveland, engrs. CD 1/11—ENR 1/17.

Bids Asked February 12

Tex., Amarillo—A. P. Hancock, city mgr., City Hall, imprv. water distr. sys. $65,000. Freese & Nichols, Danciger Bldg., Fort Worth, engrs. CD 8/2—ENR 8/23, under Postwar Projects.

Bids Asked February 13

†Calif., San Diego—Yards & Docks Annex, Navy Dpt., Arlington, Va., connection to low pressure fresh water piping sys., Piers 10 to 13, Spec. 17474. Over $15,000. Plans deposit $30.

Bids Asked February 15

Tex., Llano—M. C. Dalchaw, mayor, City Hall, WW imprvs. and sanitary sewerage sys. $400,000. Consolidated Architects-Engineers, Fort Worth National Bank Bldg., Fort Worth, engrs. CD 12/10—ENR 1/3.

Bids Asked February 21

Wis., Winneconne—Village, O. Onsorge, clk., pump. station, deep well pump, booster pumps. McMahon Engrg. Co., Menasha, engr. CD 5/24—ENR 6/14, under Postwar Projects.

LOW BIDDERS

†Calif., Alameda—Yards & Docks Annex, Navy Dpt., Arlington, Va., water sys. addns. for fire hydrants and domestic supply, Naval Air Sta., NOY 12355, Spec. 16582, from Anderson & Rowe, 2501 Harrison St., San Francisco, Item 1 $227,297. CD 1/15—ENR 1/17.

Calif., Glendale—City, City Hall, Jan. 24, 100 x 200 ft. rein.-con. reservoir known as Melwood 968, from P. W. Case, 7121 Hayvenhurst Ave., Van Nuys, $99,616; 200x200 ft., rein.-con. reservoir known as Rossmoyne 1290, from Natha A. Moore, 2951 Valley Blvd., Alhambra, $204,290. CD 12/28—ENR 1/10.

†Calif., San Diego—Navy Pub. Wks. Office, San Diego, Jan. 25, installing water, steam and air services for Piers 6 and 8, Reserve Fleet berthing facilities, exten. city's 16 in. high pressure main, boiler house, etc., from M. H. Golden, 3455 Noell St., $258,975. CD 1/9—ENR 1/17.

Ill., Chicago—City, Dpt. P. Wks., City Hall, Jan. 18, two hundred 6 in. and three thousand 12 in. pieces c.i. water pipe, from U. S. Pipe & Foundry, 122 S. Michigan St. $92,246.

N. C., Hickory—City, W. Lyerly, mayor, WW imprvs., from V. B. Higgins Co., Hickory, $161,940. W. C. Olsen, 5 Exchange Pl., Raleigh, engr.

Wash., Lake Stevens—Pub. Utilities Dist. 1, 1917 Hewitt Ave., Everett, Jan. 17, 40,900 ft. 4- to 18- in. c.i. or cement asbestos pipe, 300 water meters and thirty 4 in. gate valves for water sys., from Johns-Manville Sales Corp., 777 Thomas St., Seattle. $29,946. CD 12/31—ENR 1/10.

CONTRACTS AWARDED

†Calif., Los Angeles—Veterans Admin., Vermont Ave. between H and I Sts. N.W., Wash. 25, D. C., Water Treatment Plant 293 at Veterans Hospital, Proj. 2625, to David Keusder & Brown, 1181/4 N. Larchmont Bldg. $24,670. CD 11/21—ENR 11/29, under Public Bldgs.

Calif., Pittsburg—City, F. R. Teormina, clk., City Hall, filtration plant addn., at Municipal Water Plant, to Pacific Pipeline Constr. Co., 2128 San Pablo St., El Cerrito. $23,955. CD 1/4—ENR 1/24.

Ill., Elgin—City, M. H. Brightman, clk., City Hall, water softening equip., to Elgin Softener Corp., Elgin. $21,990.

Minn., White Bear Lake—City, Mrs. E. Stickley, clk., deep well, furnish and install pump, pumphouse, to C. J. Mattlin, White Bear Lake. $15,400. Bids rejected on wiring. Toltz, King & Day, 1509 Pioneer Bldg., St. Paul, engrs. CD 1/17—ENR 1/24, under LB.

N. C., Sanford — City, W. W. Williams, mayor, repairing earth dam at City Waterworks Plant, concrete apron and freeboard wall, channel excav., riprapping and sodding of banks, to F. D. Cline Constr. Co., Inc., P. O Box 349, Raleigh, $25,506. Bids 1/22. CD 1/11—ENR 1/17.

Location of ENR Correspondents

Symbols and Abbreviations Include:

† Federal Government
★ Project of $500,000 or over
ENR Engineering News-Record
CD Engineering News-Record Construction Daily

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

Classes of Construction

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

Stages Reported

PROPOSED: (except Streets & Roads); BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.;

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

O., Cincinnati—City, furnishing, laying 14,092 ft. 6 and 12 in. cement lined c.i. watermain in Cypress Way, to Crumley, Jones & Crumley, Blue Ash and Hegner Dr., Deer Park, Cincinnati. $32,273. Bids 12/26. H. H. Kranz, city engr.

O., Toledo—Comrs. Lucas Co., Court House, 13,320 ft. 6 and 8 in. c.i. watermains, Weston Gardens, Water Line 256, and 2,330 ft. 6 and 8 in. c.i. water mains, Reynolds Rd., Water Line 259, to G. H. Leach Co., Inc., Bellefontaine, $49,664. Awarded 1/23. S. C. McKee, Courthouse, co. san. engr. CD 9/28—ENR 10/11.

S. C., Union—City, J. J. Collins, chn. P. Wks., 300,000 gal. clear water reservoir, to G. E. Moore Co., Greenwood. $20,470. Harwood Beebe Co., Spartanburg, engr. CD 1/7.

Alta., Lethbridge—City, rein.-con. filtration plant, day labor. $60,000. CD 1/5/45—ENR 1/11/45.

SEWERS, WASTE DISPOSAL

BIDS ASKED

Bids Asked February 7

Fla., Jacksonville—W. E. Shedden, city engr., Orange and Main St., 10,890 lin. ft., 8- to 48-in. storm and sanitary sewers in various streets. CD 1/10/45—ENR 1/25/45, under Postwar Projects.

Bids Asked February 7

Tex., Ennis—City, R. F. Brumback, mayor, City Hall, sanitary sewer exten. Plans deposit $10. Koch & Fowler, Great National Life Bldg., Dallas, engrs. CD 10/19—ENR 10/25.

Bids Asked February 11

Conn., Stamford—N. D. Hale, comr. Finance, Town Hall, storm sewer construction, etc. Plans deposit $25., adv. ENR 1/31. CD 9/7/43—ENR 9/9/43 under Postwar Projects.

Bids Asked February 14

Ill., Chicago—J. J. Sullivan, clk., Sanitary Dist. of Chicago, 910 S. Michigan Ave., 12,025 ft. Harms Road Intercepting Sewers, in villages of Morton Grove, Glenview and Wilmette, in Niles and Northfield Twps. Plans deposit $20., adv. ENR 1/31.

Bids Asked March 20

Calif., Mill Valley—City, City Clerk's Office, City Hall, 8- to 30-in. vitr. clay and 8 and 12 in. c.i. sewers, manholes, lampholes, and wye branches and rein.-con. trestles on wood piles for supporting 30 in. pipe in unstable ground. Plans deposit $25. J. S. Bates, 3134 Eton Ave., Berkeley, engr. CD 10/4—ENR 10/18.

SOON LETS CONTRACT

Pa., Phila.—Gulf Oil Corp., 30 St. and Penrose Ave., soon lets contract sewer separator. $250,000. CD 10/29—ENR 11/15.

CONTRACTS AWARDED

N. C., Fayetteville—City, storm sewers, to Zeigler-Cline Constr. Co., P.O. Box 349, Raleigh. $48,441. Bids 1/14. CD 1/10.

Pa., Glenolden—Glenolden Boro, H. Simon, secy., Boro Hall, storm drain, appurtenances, to L. Mariani, 801 Lorraine Ave., Ardmore, over $25,000. Awarded 1/16. CD 1/25/45—ENR 2/1/45.

Pa., Phila.—City, Dpt. P. Wks., City Hall Annex, Upper Delaware Collecting Sewer, to J. N. Driscoll, 27 E. Durham St. $155,318. Awarded 1/17.

Ont., Toronto—City, R. H. Saunders, mayor, sewer in Lansdowne Ave. from Queen St. W. to Rideau Ave., to Dundas Constr. Co. Ltd., 28 Grove Ave. $39,190.

BRIDGES

BIDS ASKED

Bids Asked February 5

Conn., Hartford—City, Bd. Contr. & Supply, 550 Main St., rebuilding Broad St. bridge over Park River. $30,000. CD 11/1—ENR 11/29.

Ill., Waukegan—At office R. M. Lobell, supt. Lake Co. Hy. Dpt., Waukegan, widening rein.-con. slab bridge, locally known as the Gosswiller Bridge, Prairie View, State Aid Route 32, Sect. 83-B-MFT. Plans deposit $3.

Bids Asked February 14

Wis., Madison—State Hy. Comm., Water Street-Summit Ave. Bridge, approaches, S.P. 6555, Eau Claire, Eau Claire Co.

Bids Asked February 25

Ia., Grundy Center—Bd. Supervs. Grundy Co., 180 x 22 ft. continuous I-beam bridge or alternate six 32 x 20 ft. multiple span I-beam bridge, also twin 8 x 6 ft. x 73 ft. concrete box culvert. Over $25,000. J. Wiersma, Grundy Center, co. engr.

LOW BIDDERS

California—State Div. Hys., Sacramento, 2 bridges across Paradise Cut and Paradise Cut overflow, 6 mi. east of Tracy, San Joaquin Co., from Stockton Constr. Co., 40 West Clay St., Stockton, $119,997. G. T. McCoy, Sacramento, state hy. engr. CD 12/28—ENR 1/10.

Ill., Chicago—Cooke Co., County Bldg., Jan. 21, 47 St. grade separation under Belt Ry., Sect. 162-1313.3-MFT, from Michael J. McDermott & Co., 30 N. LaSalle St., $136,373*** Willow Rd. grade separation under C. & N. W. Ry. and C. M. St. P. & P. RR., 0.291 mi. Sect. 110-1922.5-MFT, and two 28 ft., one 40 ft. continuous rein.-con. slab bridge approaches, over Middle Fork, North Branch Chicago River, Winnetka Ave., 0.5591 mi. Sect. 226-0203-15d, from Arcole-Midwest Corp., 221 N. La Salle St., $154,421 and $84,153 respectively***widening 123rd St. grade separation over Wabash Ry., Sect. 180-1019.1-MFT, from A. C. Rehm, 213 S. Marion St., Oak Park, $149,614. No bids received Jan. 21, widening Madison St. Bridge, over Des Plaines River, Sect. 154-0404-MFT; furnishing structural steel, 1,363,963 lb. and deck plates for Willow St. grade separation, Sect. 110-1922.51-MFT. CD 1/15.

Kan., Kansas City—Wyandotte Co., R. Wheat, chn. Comrs., Court House, postponed bids to have been opened Dec. 10, reconstructing 12 St. bridge. $315,000. CD 11/20—ENR 11/29.

Kentucky—State Dpt. Hys., Frankfort, Jan. 18, bridge substructure and superstructure